

# **29 CFR PART 1926**

# **29 CFR PART 1910**

Kentucky  
Occupational Safety and Health Standards for  
Construction and General Industry



Kentucky Labor Cabinet  
Kentucky Occupational Safety and Health Program  
Frankfort, Kentucky

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## INTRODUCTION

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This unofficial publication contains only Kentucky-specific regulations adopted by the Kentucky Occupational Safety and Health (OSH) Standards Board or the Kentucky Labor Cabinet which supersede federal Occupational Safety and Health Administration (OSHA) standards. The official regulations are maintained by the Legislative Research Commission. You may contact the Legislative Research Commission at (502) 564-8100 or view the material online at [www.lrc.ky.gov](http://www.lrc.ky.gov).

This publication is presented in three (3) distinct parts. Part 1 contains Kentucky specific regulations that supersede OSHA standards and are applicable to both general industry and construction. Part 2 contains Kentucky specific regulations that supersede OSHA standards and are applicable to general industry along with those found in Part 1. Part 3 contains Kentucky specific regulations that supersede the OSHA standards and are applicable to the construction industry along with those found in Part 1.

This unofficial publication is not a comprehensive, all inclusive presentation of every OSH requirement. When determining the applicable OSH regulatory requirements, the reader should initially refer to this publication to determine whether any state-specific language exists that supersedes OSHA requirements. If state specific language does not exist that supersedes an OSHA requirement, the reader should comply with, at a minimum, the applicable OSHA requirement that has been adopted by the Kentucky OSH Standards Board and Kentucky Labor Cabinet. References to the Secretary of Labor, Assistant Secretary of Labor, OSHA Regional Administrator, or Area Director, may refer instead to the Kentucky Labor Cabinet Secretary, Kentucky Department of Workplace Standards Commissioner, or designee.

The Kentucky OSH Program, under the statutory authority of KRS Chapter 338 and through a state plan approved by the U.S. Department of Labor, OSHA, maintains authority for enforcement, standards promulgation, on-site consultation, and training services related to job safety and health. Therefore, the Kentucky OSH Program may or may not adopt federal standards or policies. Employers and employees may contact the Kentucky OSH Program at (502) 564-3070 to determine if the Kentucky OSH Program comports with federal standards or policies.

The Kentucky OSH Standards Board meets at least annually. Changes in the regulations appear in the *Administrative Register of Kentucky*, published by the Legislative Research Commission.

Additional information about the Kentucky Labor Cabinet, the Kentucky Department of Workplace Standards, the Kentucky OSH Standards Board, and the Kentucky OSH Program, including cost-free services offered by the Division of Education and Training, may be found at [www.labor.ky.gov](http://www.labor.ky.gov) or by calling (502) 564-3070.

# KENTUCKY OCCUPATIONAL SAFETY and HEALTH REGULATIONS

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## **PART 1 State Specific Regulations Applicable to Construction and General Industry**

### **KENTUCKY REVISED STATUTE Title XXVII Labor and Human Rights Chapter 338 Occupational Safety and Health of Employees**

#### **338.031 Obligations of Employers and Employees**

(1) Each employer:

- (a) Shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees;
- (b) Shall comply with occupational safety and health standards promulgated under this chapter.

(2) Each employee shall comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to this chapter which are applicable to his own actions and conduct.



## **803 KAR 2:018**

### **REFUSE COLLECTION AND COMPACTION EQUIPMENT**

**Section 1.** The Occupational Safety and Health Standards Board hereby adopts the safety and health standards as printed in the American National Standards Institute (ANSI) Z 245.1-1975, safety requirements for refuse collection and compaction equipment. The employer shall comply with the requirements as specified in this regulation. These standards are hereby adopted by reference with the following additions, exceptions and deletions.

(1) Certain definitions as found in ANSI Z 245.1-1975, Section 2. "General Definitions" shall be revised as follows:

(a) **"Employee"** means any person employed except those employees excluded in KRS 338.021.

(b) **"Employer"** means any entity for whom a person is employed except those employers excluded in KRS 338.021.

(c) **"Hazardous"** means any practice or condition in a place of employment which may be deemed detrimental to the safety and health of employees.

(d) **"Person"** means any individual, public or private corporation, political subdivision, copartnership, association, firm, estate, or other entity whatsoever, but not to include an individual employed as "maintenance personnel" or "operators" as defined in ANSI Z 245.1-1975.

### **Section 2. Purpose and Application.**

(1) The purpose of this regulation is to provide in accordance with KRS 338.011, minimum safety and health standards for the protection of employee with respect to the use and operation of refuse collection and compaction equipment.

(2) This adopted standard will provide specific guidelines to employers which will assist them in the purchase of new, used or modified equipment.

(3) This regulation will advise employers in the necessary safety requirements with respect to manufacturing specifications, installation, modification, maintenance and operation of refuse collection and compaction equipment.

(4) This regulation shall not preempt nor preclude any specific safety or health applicable standard in effect.

(5) Unless otherwise provided, this adopted standard is intended primarily to apply to new or modified, stationary or mobile, refuse collection and compaction equipment. All modifications to existing equipment shall be made in accordance with this regulation.

(6) Where safety standards have been adopted by any public agency or private concern, this regulation does not modify any provision of such standard unless this regulation imposes greater restrictions, in which case the provisions of this regulation shall prevail.

**Section 3. Reference.**

A copy of the American National Standards Institute (ANSI) Z 245.1-1975, incorporated by reference, may be obtained for a fee from the American National Standards Institute, Incorporated, 1430 Broadway, New York, New York 10018 or available for review at the Department of Workplace Standards, Labor Cabinet, Frankfort, Kentucky 40601 or at a public library in Kentucky.

**Section 4. Effective Date.**

(1) The provisions contained within ANSI Z 245.1-1975 as adopted by this regulation relating to all new mobile compaction equipment and all new stationary compaction equipment are effective January 1, 1980.

(2) The provisions as discussed in ANSI Z 245.1-1975 as adopted by this regulation, found in Paragraphs 5.1.3; 5.2; 6.1.(1), (3), (4), (5) and (7); and 6.2 relating to existing mobile equipment as well as Paragraphs 5.1.3; 5.2; 5.5; 6.1.2(1), (2), (3), (5) and (8) and 6.2 relating to existing stationary equipment shall be effective January 1, 1980. All other paragraphs within this ANSI Z 245.1-1975 do not apply to existing equipment.

## **803 KAR 2:019**

### **RECEIVING AND UNLOADING BULK HAZARDOUS LIQUIDS**

**Section 1. Definition: "Hazardous liquid"** means, for the purpose of this regulation, a chemical or mixture of chemicals that is toxic, an irritant, corrosive, a strong oxidizer, a strong sensitizer, combustible, flammable, extremely flammable, dangerously reactive or pressure generating or which otherwise may cause substantial personal injury or substantial illness during, or as a direct result of any customary or reasonably foreseeable handling or use.

#### **Section 2. Scope.**

This regulation will provide employers in Kentucky with specific requirements for chemical handling procedures to control receiving and transfer to storage of bulk hazardous liquids received via motor truck. This applies to chemicals which if inadvertently mixed or transferred to an inappropriate container could result in explosion and/or production of toxic gases. This regulation does not apply to receiving gasoline, fuel oil, or liquefied petroleum gas at retail or wholesale outlets or to industrial filling stations where the industry standard operating procedure requires the hauler to make connections and complete delivery. This regulation does not apply to agriculture.

#### **Section 3. General Requirements.**

(1) Signs and labels shall be posted as follows:

- (a) At bulk chemical receiving and storage facilities, capable of unloading tank trucks or trailers signs and labels, readily legible at normal operating positions, shall indicate appropriate contents and item identification at receiving and dispensing connections, valves, tanks, and the storage area perimeter.
- (b) Prominently displayed signs at critical access points shall direct tank truck drivers to plant security stations or to supervisory personnel. Signs at the unloading area shall give specific instruction to drivers not to connect truck tank hoses to chemical receiving lines.
- (c) Bills of lading, freight bills or accompanying paper work should have each hazardous chemical clearly identified by its shipping name (49 CFR) or if N.O.S. (not otherwise specified) by its common name. Handling information clearly indicated for receiver information should be included.

(2) Receiving liquid chemicals.

- (a) Receiving of bulk liquid chemicals shall be coordinated by the receiving department or persons responsible for receiving. Only those persons trained and authorized shall make the required chemical identification and perform or supervise the unloading of hazardous chemicals.
- (b) Prior to unloading, the authorized person shall make an inspection of the accompanying papers, check the load and ascertain its identity.
- (c) If necessary for identification, chemical testing shall be accomplished prior to acceptance.

- (d) The authorized person shall direct the driver to the proper unloading area.
- (e) The receiving area, where chemicals are unloaded, shall be secured behind a locked fence enclosure or all receiving connections shall be under lock and key or made secure by other positive means.
- (f) The authorized person shall be responsible for control of keys or combination to locking devices.
- (g) The tank truck driver may make connection to the tank truck. An authorized person only shall make connection to company receiving connections and supervise the unloading into storage. The tank truck driver may make both connections provided an authorized person is present to identify, check and supervise the connection and unloading. In receiving areas where more than one (1) chemical is stored, the tank connection shall be individually keyed. Connection to different chemical receiving systems shall be locked by separated keying arrangement. Due caution shall be made to prevent spills and to assure that the receiving tank is not overfilled. Prior arrangements shall be made to assure that inadvertent overflow is controlled without exposing employees. (It is recognized that environmental protection regulations require storm or sewer drains also be protected.)
- (h) Upon completion of unloading, the receiving device or the enclosure shall be locked and the key returned to its designated security location or other equivalent action be taken to secure the chemical inventory.
- (i) Appropriate respiratory and other emergency personal protective equipment for the body, eyes, face, etc., shall be immediately available and used in accordance with 29 CFR 1910, Subpart I, as adopted by 803 KAR 2:308.

(3) Training.

- (a) Authorized persons responsible for the acceptance of potentially hazardous chemicals shall have an understanding of the particular hazards associated with those chemicals individually and in combination.
- (b) Internal written operating procedures shall be prepared. All affected employees shall be trained in these procedures.
- (c) Written emergency evacuation plans shall be prepared, and practiced by all potentially affected employees.
- (d) Copies of the operating procedures, emergency evacuation plans, and a listing of personnel authorized to receive bulk chemicals shall be on the premises and available to employees and to compliance safety and health officers.
- (e) Employees subject to exposure in the storage area requiring the use of respirators shall be fitted for and trained in their use, all in accordance with 29 CFR 1910.134, as adopted by 803 KAR 2:308.
- (f) Special first aid procedures shall be prepared for the potential injuries of the operation. First aid capability shall be in accordance with 803 KAR 2:310.

## **803 KAR 2:040**

### **DEFINITIONS**

**Section 1.** As used in these administrative regulations:

(1) The definitions and interpretations contained in KRS 338.015 shall be applicable to such terms when used in these regulations.

(2) “**Working days**” means Monday through Friday but shall not include Saturday, Sundays, or federal or state holidays. In computing fifteen (15) working days, the day of receipt of any notice shall not be included.

(3) “**Compliance Safety and Health Officer**” means a person authorized by the Executive Director, Office of Occupational Safety and Health, to conduct inspections.

**803 KAR 2:050**  
**SCOPE**

**Section 1.** These regulations shall apply to all employers, employees, and places of employment throughout the Commonwealth except the following:

- (1) Employees of the United States Government.
- (2) Employers, employees, and places of employment over which federal agencies other than the United States Department of Labor exercise statutory authority to prescribe or enforce standards or regulations affecting occupational safety and health.
- (3) Nothing in these regulations shall be construed to supersede or in any manner affect any workmen's compensation law or to enlarge or diminish or affect in any manner the common law or statutory rights, duties, or liabilities of employees, under any law with respect to injuries, diseases, or death of employees arising out of, or in the course of employment.

## **803 KAR 2:060**

### **EMPLOYERS' RESPONSIBILITIES**

#### **Section 1. Definitions.**

(1) “**Abatement**” means action by an employer to comply with a cited standard or regulation or to eliminate a recognized hazard identified by Office of Occupational Safety and Health during an inspection.

(2) “**Abatement date**” means:

(a) For an uncontested citation item, the later of:

1. The date in the citation for abatement of the violation;
2. The date approved by the Office of Occupational Safety and Health or established in litigation as a result of a petition for modification of the abatement date (PMA); or
3. The date established in a citation by an informal settlement agreement.

(b) For a contested citation item for which the Kentucky Occupational Safety and Health Review Commission (KOSHRC) has issued a final order affirming the violation, the later of:

1. The date identified in the final order for abatement; or
2. The date computed by adding the period allowed in the citation for abatement to the final order date;
3. The date established by a formal settlement agreement.

(3) “**Affected employees**” means those employees who are exposed to the hazard(s) identified as violation(s) in a citation.

(4) “**Final order date**” means:

(a) For an uncontested citation item, the fifteenth working day after the employer's receipt of the citation;

(b) For a contested citation item:

1. The thirtieth day after the date on which a decision or order of a commission hearing officer has been docketed with the commission, unless a member of the commission has directed review; or
2. Where review has been directed, the thirtieth day after the date on which the Commission issues its decision or order disposing of all or pertinent part of a case; or
3. The date on which an appeals court issues a decision affirming the violation in a case in which a final order of KOSHRC has been stayed.

(5) “**Movable equipment**” means a hand-held or non-hand-held machine or device, powered or unpowered, that is used to do work and is moved within or between worksites.

(6) “**Establishment**” means a single physical location where business is conducted or where services or industrial operations are performed, (For example: A factory, mill, store, hotel, restaurant, movie theater, farm, ranch, bank, sales office, warehouse, or central administrative office.) Where distinctly separate activities are performed at a single physical location (such as contract construction activities from the same physical location as a lumber yard), each activity shall be treated as a separate physical establishment, and a separate notice or notices shall be posted in each such establishment, to the extent that such notices have been furnished by the Office of Occupational Safety and Health. Where employers are engaged in activities which are physically dispersed, such as agriculture, construction, transportation, communications, and electric, gas and sanitary services, the notice or notices required by this section shall be posted at the location to which employees report each day. Where employees do not usually work at, or report to, a single establishment, such as traveling salesmen, technicians, engineers, etc., such notice or notices shall be posted at the location from which the employees operate to carry out their activities. In all cases, such notice or notices shall be posted in accordance with the requirements of section (2) of this regulation.

## **Section 2. Purpose and Scope.**

(1) KRS Chapter 338 requires, in part, that every employer shall furnish to his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees. Covered employers shall comply with the occupational safety and health standards promulgated pursuant to KRS Chapter 338. Employees shall comply with standards, rules, regulations and orders issued under KRS Chapter 338 which are applicable to their own actions and conduct.

(2) The Office of Occupational Safety and Health is authorized to conduct inspections and issue citations and proposed penalties for alleged violations.

## **Section 3. Posting of Notice, Availability of Act, Regulations, and Applicable Standards.**

(1) Each employer shall post and keep posted a notice or notices to be furnished by the Office of Occupational Safety and Health, Department of Labor, informing employees of the protections and obligations provided for in KRS Chapter 338, and that for assistance and information, including health standards, employees should contact the employer or the Office of Occupational Safety and Health. Such notice or notices shall be posted by the employer in each establishment in a conspicuous place or places where notices to employees are customarily posted. Each employer shall take steps to ensure that such notices are not altered, defaced or covered by other material that obscures the poster.

(2) Copies of KRS Chapter 338, all regulations filed pursuant thereto, and all applicable standards will be available at the Department of Labor. If an employer has obtained copies of these materials, he shall make them available upon request to any employee or his authorized representative for review in the establishment where the employee is employed on the same day the request is made or at the earliest time mutually convenient to the employee or his authorized representative and the employer.

(3) Any employer failing to comply with the provisions of this section shall be subject to citation and penalty in accordance with the provisions of KRS 338.991.



#### **Section 4. Abatement Verification.**

(1) Purpose. Inspections by the Office of Occupational Safety and Health are intended to result in the abatement of violations of KRS Chapter 338. This section sets forth the procedures the Office of Occupational Safety and Health will use to ensure abatement. These procedures are tailored to the nature of the violation and the employer's abatement actions.

(2) Scope and application. This section applies to employers who receive a citation for a violation of KRS Chapter 338.

(3) Abatement certification.

(a) Within 10 calendar days after the abatement date, the employer must certify to the Office of Occupational Safety and Health (the Agency) that each cited violation has been abated, except as provided in paragraph (3)(b) of this section.

(b) The employer is not required to certify abatement if the Compliance Officer, during the on-site portion of the inspection:

1. Observes, within 24 hours after a violation is identified, that abatement has occurred; and
2. Notes in the citation that abatement has occurred.

(c) The employer's certification that abatement is complete must include, for each cited violation, in addition to the information required by subsection (8) of this section, the date and method of abatement and a statement that affected employees and their representatives have been informed of the abatement. Note to paragraph (3): Appendix A (incorporated by reference in Section 5 of this section) contains a Sample Abatement Certification Letter.

(4) Abatement documentation.

(a) The employer must submit to the Agency, along with the information on abatement certification required by paragraph (3)(c) of this section, documents demonstrating that abatement is complete for each willful or repeat violation and for any serious violation for which the Agency indicates in the citation that such abatement documentation is required.

(b) Documents demonstrating that abatement is complete may include, but are not limited to, evidence of the purchase or repair of equipment, photographic or video evidence of abatement, or other written records.

(5) Abatement plans.

(a) The Agency may require an employer to submit an abatement plan for each cited violation (except an other-than-serious violation) when the time permitted for abatement is more than 90 calendar days. If an abatement plan is required, the citation must so indicate.

(b) The employer must submit an abatement plan for each cited violation within 25 calendar days from the final order date when the citation indicates that such a plan is required. The abatement plan must identify the violation and the steps to be taken to achieve abatement, including a schedule for completing abatement and, where necessary, how employees will be protected from exposure to the violative condition in the interim until abatement is complete.

*Note to paragraph (5): Appendix B (incorporated by reference in Section 5) contains a Sample Abatement Plan form.*

(6) Progress reports.

(a) An employer who is required to submit an abatement plan may also be required to submit periodic progress reports for each cited violation. The citation must indicate:

1. That periodic progress reports are required and the citation items for which they are required;
2. The date on which an initial progress report must be submitted, which may be no sooner than 30 calendar days after submission of an abatement plan;
3. Whether additional progress reports are required; and
4. The date(s) on which additional progress reports must be submitted.

(b) For each violation, the progress report must identify, in a single sentence if possible, the action taken to achieve abatement and the date the action was taken.

*Note to paragraph (6): Appendix B (incorporated reference by Section 5) contains a Sample Progress Report Form.*

(7) Employee notification.

(a) The employer must inform affected employees and their representative(s) about abatement activities covered by this section by posting a copy of each document submitted to the Agency or a summary of the document near the place where the violation occurred.

(b) Where such posting does not effectively inform employees and their representatives about abatement activities (for example, for employers who have mobile work operations), the employer must:

1. Post each document or a summary of the document in a location where it will be readily observable by affected employees and their representatives; or
2. Take other steps to communicate fully to affected employees and their representatives about abatement activities.

(c) The employer must inform employees and their representatives of their right to examine and copy all abatement documents submitted to the Agency.

1. An employee or an employee representative must submit a request to examine and copy abatement documents within 3 working days of receiving notice that the documents have been submitted.

2. The employer must comply with an employee's or employee representative's request to examine and copy abatement documents within 5 working days of receiving the request.

(d) The employer must ensure that notice to employees and employee representatives is provided at the same time or before the information is provided to the Agency and that abatement documents are:

1. Not altered, defaced, or covered by other material; and

2. Remain posted for three working days after submission to the Agency.

(8) Transmitting abatement documents.

(a) The employer must include, in each submission required by this section, the following information:

1. The employer's name and address;

2. The inspection number to which the submission relates;

3. The citation and item numbers to which the submission relates;

4. A statement that the information submitted is accurate; and

5. The signature of the employer or the employer's authorized representative.

(b) The date of postmark is the date of submission for mailed documents. For documents transmitted by other means, the date the Agency receives the document is the date of submission.

(9) Movable equipment.

(a) For serious, repeat, and willful violations involving movable equipment, the employer must attach a warning tag or a copy of the citation to the operating controls or to the cited component of equipment that is moved within the worksite or between worksites.

*Note to paragraph (9)(a): Attaching a copy of the citation to the equipment is deemed by the Office of Occupational Safety and Health to meet the tagging requirement of paragraph (9)(a) of this section as well as the posting requirement of 803 KAR 2:125.*

(b) The employer must use a warning tag that properly warns employees about the nature of the violation involving the equipment and identifies the location of the citation issued.

*Note to paragraph (9)(b): Non-Mandatory Appendix C in the material incorporated by reference in Section 5 of this section contains a sample tag that employers may use to meet this requirement.*

(c) If the violation has not already been abated, a warning tag or copy of the citation must be attached to the equipment:

1. For hand-held equipment, immediately after the employer receives the citation; or
2. For non-hand-held equipment, prior to moving the equipment within or between worksites.

(d) For the construction industry, a tag that is designed and used in accordance with 29 CFR 1926.20(b)(3) (incorporated by 803 KAR 2:402) and 29 CFR 1926.200(h) (incorporated by 803 KAR 2:406) is deemed to meet the requirements of this section when the information required by paragraph (9)(b) is included on the tag.

(e) The employer must assure that the tag or copy of the citation attached to movable equipment is not altered, defaced, or covered by other material.

(f) The employer must assure that the tag or copy of the citation attached to movable equipment remains attached until:

1. The violation has been abated and all abatement verification documents required by this regulation have been submitted to the Agency;
2. The cited equipment has been permanently removed from service or is no longer within the employer's control; or
3. The Commission issues a final order vacating the citation.

## **Section 5. Incorporation by reference.**

### **Abatement Verification**

Note: Appendices A through C provide information and nonmandatory guidelines to assist employers and employees in complying with the appropriate requirements of this section.

**Appendix A**  
**Sample Abatement-Certification Letter**  
**(Nonmandatory)**

Kentucky Department of Labor  
Office of Occupational Safety and Health  
1047 US 127 South, Suite 4  
Frankfort, KY 40601

[Company Name]  
[Company's Address]

The hazard referenced in Inspection Number [insert 9-digit #] for violation identified as:

Citation [insert #] and item [insert #] was corrected on [insert date] by:

\_\_\_\_\_.

Citation [insert #] and item [insert #] was corrected on [insert date] by:

\_\_\_\_\_.

Citation [insert #] and item [insert #] was corrected on [insert date] by:

\_\_\_\_\_.

Citation [insert #] and item [insert #] was corrected on [insert date] by:

\_\_\_\_\_.

Citation [insert #] and item [insert #] was corrected on [insert date] by:

\_\_\_\_\_.

Citation [insert #] and item [insert #] was corrected on [insert date] by:

\_\_\_\_\_.

Citation [insert #] and item [insert #] was corrected on insert date by:

\_\_\_\_\_.

I attest that the information contained in this document is accurate.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Typed or Printed Name

**Appendix B**  
**Sample Abatement Plan or Progress Report**

**(Nonmandatory)**

Kentucky Department of Labor  
Office of Occupational Safety and Health  
1047 US 127 South, Suite 4  
Frankfort, KY 40601

[Company Name]  
[Company Address]

Check one:

Abatement Plan [ ]

Progress Report [ ]

Inspection Number \_\_\_\_\_

Page \_\_\_\_\_ of \_\_\_\_\_

Citation Number(s)\* \_\_\_\_\_

Item Number(s)\* \_\_\_\_\_

Action	Proposed Completion Date (for abatement plans only)	Completion Date (for progress reports only)
1.....	.....	.....
2.....	.....	.....
3.....	.....	.....
4.....	.....	.....
5.....	.....	.....
6.....	.....	.....
7.....	.....	.....

Date required for final abatement:\_\_\_\_\_

I attest that the information contained in this document is accurate.

\_\_\_\_\_  
Signature


\_\_\_\_\_  
Typed or Printed Name

Name of primary point of contact for questions: [optional]

Telephone number:\_\_\_\_\_

\*Abatement plans or progress reports for more than one citation item may be combined in a single abatement plan or progress report if the abatement actions, proposed completion dates, and actual completion dates (for progress reports only) are the same for each of the citation items.

Appendix C  
Sample Warning Tag  
(Nonmandatory)



**WARNING:**

EQUIPMENT HAZARD  
CITED BY OSHA

EQUIPMENT CITED:  
\_\_\_\_\_  
\_\_\_\_\_

HAZARD CITED:  
\_\_\_\_\_  
\_\_\_\_\_

FOR DETAILED INFORMATION  
SEE OSHA CITATION POSTED AT:  
\_\_\_\_\_  
\_\_\_\_\_

BACKGROUND COLOR—ORANGE  
MESSAGE COLOR—BLACK



**803 KAR 2:062**  
**EMPLOYERS' RESPONSIBILITY WHERE EMPLOYEES**  
**ARE EXPOSED TO TOXIC SUBSTANCES**

**Section 1. General Requirements.**

(1) Employers shall monitor areas where employees are exposed to potentially toxic substances or harmful physical agents which are required to be monitored or measured pursuant to those standards as adopted by the Kentucky Occupational Safety and Health Standards Board.

(2) Employers shall provide employees or their representatives an opportunity to observe such monitoring or measuring.

(3) Each employer shall promptly notify any employee or employees who have been or are being exposed to toxic materials or harmful physical agents in concentrations or at levels which exceed those prescribed by those applicable occupational safety and health standards adopted by the Kentucky Occupational Safety and Health Standards Board. Where pursuant to those applicable occupational safety and health standards adopted and promulgated by the Kentucky Occupational Safety and Health Standards Board it is required that exposure to certain toxic substances or agents be limited or prohibited, each employer shall notify his employees who are subject to such exposure, inform them of the corrective action required, if any, and notify them when such action has been taken.

(4) Each employer shall make and maintain records of all monitoring activity required by this regulation and make appropriate provisions whereby each employee, former employee or a representative of either may have access to such records which will indicate the levels to which the particular employee or former employee has been exposed. Said person shall also be permitted to copy those records pertaining to his exposure levels or the exposure levels of the employee or former employee he is representing.

## **803 KAR 2:070**

### **INSPECTION; PROCEDURE**

#### **Section 1. Authority for Inspections.**

(1) Compliance Safety and Health Officers of the Office of Occupational Safety and Health are authorized to enter without delay and at reasonable times any factory, plant, establishment, construction site, or other area, workplace or environment where work is performed by an employee of an employer; to inspect and investigate during regular working hours and at other reasonable times, and within reasonable limits and in a reasonable manner, any such place of employment, and all pertinent conditions, structures, machines, apparatus, devices, equipment and materials therein; to question privately any employer, owner, operator, agent or employee; and to review records required by KRS Chapter 338 and regulations issued pursuant thereto, and other records which are directly related to the purpose of the inspection.

(2) Prior to inspecting areas containing information which is classified by an agency of the United States Government, in the interest of national security, compliance safety and health officers shall have obtained the appropriate security clearance.

#### **Section 2. Objection to Inspection.**

Upon a refusal to permit a compliance safety and health officer, in the exercise of his official duties, to enter without delay and at reasonable times any place of employment or any place therein, to inspect, to review records, or to question any employer, owner, operator, agent, or employee, in accordance with this regulation, or to permit a representative of employees to accompany the compliance safety and health officer during the physical inspection of any workplace in accordance with 803 KAR 2:110, the compliance safety and health officer shall terminate the inspection or confine the inspection to other areas, conditions, structures, machines, apparatus, devices, equipment, materials, records, or interviews concerning which no objection is raised. The compliance safety and health officer shall endeavor to ascertain the reason for such refusal, and he shall immediately report the refusal and the reason therefor to the Executive Director, Office of Occupational Safety and Health. The executive director shall promptly take appropriate action including compulsory process, if necessary.

#### **Section 3. Entry not a Waiver.**

Any permission to enter, inspect, review records, or question any person, shall not imply or be conditioned upon a waiver of any cause of action, citation, or penalty under KRS Chapter 338. Compliance safety and health officers are not authorized to grant any such waiver.

#### **Section 4. Conduct of Inspections.**

(1) Subject to the provisions herein, inspections shall take place at such times and in such places of employment as the Executive Director, Office of Occupational Safety and Health or the compliance safety and health officer may direct. At the beginning of an inspection, compliance safety and health officers shall present their credentials to the owner, operator, or agent in charge at the establishment; explain the nature and purpose of the inspection; and indicate generally the scope of the inspection and the records specified herein which they wish to review. However, such designation of records shall not preclude access to

additional records specified herein.

(2) Compliance safety and health officers shall have authority to take environmental samples and to take or obtain photographs related to the purpose of the inspection, employ other reasonable investigative techniques, and question privately any employer, owner, operator, agent or employee of an establishment. As used herein, the term "employ other reasonable investigative techniques" includes, but is not limited to, the use of devices to measure employee exposures and the attachment of personal sampling equipment such as dosimeters, pumps, badges, and other similar devices to employees in order to monitor their exposures.

(3) In taking photographs and samples, compliance safety and health officers shall take reasonable precautions to ensure that such actions with flash, spark-producing, or other equipment would not be hazardous. Compliance safety and health officers shall comply with all employer safety and health rules and practices at the establishment being inspected, and they shall wear and use appropriate protective clothing and equipment.

(4) The conduct of inspection shall be such as to preclude unreasonable disruption of the operations of the employer's establishment.

(5) At the conclusion of an inspection, the compliance safety and health officer shall confer with the employer or his representative and informally advise him of any apparent safety and health violations disclosed by the inspection. During such conference, the employer shall be afforded an opportunity to bring to the attention of the compliance safety and health officer any pertinent information regarding conditions in the workplace.

(6) Inspection shall be conducted in accordance with the requirements of this section.

**803 KAR 2:080**  
**ADVANCE NOTICE OF INSPECTIONS**

**Section 1. Advance Notice of Inspections.**

(1) Advance notice of inspections may not be given, except in the following situations:

- (a) In cases of apparent imminent danger, to enable the employer to abate the danger as quickly as possible;
- (b) In circumstances where the inspection can most effectively be conducted after regular business hours or where special preparations are necessary for an inspection;
- (c) Where necessary to assure the presence of representatives of the employer and employees or the appropriate personnel needed to aid in the inspection; and
- (d) In other circumstances where the Executive Director, Office of Occupational Safety and Health determines that the giving of advance notice would enhance the probability of an effective and thorough inspection.

(2) (a) In the situations described in subsection (1) of this section, advance notice of inspections may be given only if authorized by the Executive Director, Office of Occupational Safety and Health, except that in cases of apparent imminent danger, advance notice may be given by the compliance safety and health officer without such authorization if the executive director is not immediately available. When advance notice is given, it shall be employer's responsibility promptly to notify the authorized representative of the employees of the inspection, if the identity of such representative is known to the employer. (See 803 KAR 2:110(2) as to situation where there is no authorized representative of employees.) Upon the request of the employer, the compliance safety and health officer will inform the authorized representative of employees of the inspection, provided that the employer furnishes the compliance safety and health officer the identity of such representative and with such other information as is necessary to enable him promptly to inform such representative of the inspection. An employer who fails to comply with his obligation under this paragraph promptly to inform the authorized representative of employees of the inspection or to furnish such information as is necessary to enable the compliance safety and health officer promptly to inform such representative of the inspection may be subject to citation and penalty under KRS 338.991.

(b) Advance notice in any of the situations described in subsection (1) of this section shall not be given more than twenty-four (24) hours before the inspection is scheduled to be conducted, except in apparent imminent danger situations and in other unusual circumstances.

(3) KRS Chapter 338.991(9) provides that any person who gives advance notice of any inspection to be conducted under this chapter, without authority from the executive director, shall, upon conviction, be punished by fine of not more than \$1,000 or by imprisonment for not more than six (6) months, or by both.

## **803 KAR 2:090**

### **UNWARRANTED INSPECTIONS; COMPLAINT**

#### **Section 1. Complaints by Employees.**

- (1) Any employee or representative of employees who believes that a violation of KRS Chapter 338 exists in any workplace where such employee is employed may request an inspection of such workplace by giving notice of the alleged violation to the Executive Director, Office of Occupational Safety and Health. Any such notice shall be reduced to writing, shall set forth with reasonable particularity the grounds for the notice, and shall be signed by the employee or representative of employees. A copy shall be provided the employer or his agent by the executive director no later than at the time of inspection, except that, upon the request of the person giving such notice, his name and the names of individual employees referred to therein shall not appear in such copy or on any record published, released, or made available by the Executive Director, Office of Occupational Safety and Health.
- (2) If upon receipt of such notification the executive director determines that the complaint meets the requirements set forth in subsection (1) of this section, and that there are reasonable grounds to believe that the alleged violation exists, he shall cause an inspection to be made as soon as practicable, to determine if such alleged violation exists. Inspections under this section shall not be limited to matters referred to in the complaint.
- (3) Prior to or during any inspection of a workplace, any employee or representative of employees employed in such workplace may notify the Executive Director, Office of Occupational Safety and Health in writing of any violation of KRS Chapter 338 which he has reason to believe exists in such workplace. Any such notice shall comply with the requirements of subsection (1) of this section.
- (4) If, after an inspection based on a complaint, a citation is issued covering a violation or danger set forth in the complaint, a copy of the citation should be sent to the complainant at the same time it is sent to the employer.
- (5) If, after an inspection based on a complaint, the executive director determines that a citation is not warranted with respect to a danger or violation alleged in the complaint, the complainant must be informed in writing of such determination. At the same time, the complainant should be notified of his rights of review of such determination. The complaining party may obtain review by submitting a written statement of position to the Executive Director, Office of Occupational Safety and Health.
- (6) KRS 338.121(3)(a) provides: "No person shall discharge or in any manner discriminate against any employee because such employee has filed any complaint or instituted or caused to be instituted any proceeding under or related to this chapter or has testified or is about to testify in any such proceeding or because of the exercise by such employee on behalf of himself or others of any right afforded by this chapter."

**Section 2. Inspection Not Warranted; Informal Review.**

(1) If the Executive Director, Office of Occupational Safety and Health determines that an inspection is not warranted because there are no reasonable grounds to believe that a violation or danger exists with respect to a complaint under Section 1 of this regulation, he shall notify the complaining party in writing of such determination. The complaining party may obtain review of such determination by submitting a written statement of position to the executive director. Upon request of the complaining party, the executive director, at his discretion, may hold an informal conference in which the complaining party may orally present his views. After considering all written and oral views presented, the executive director shall affirm, modify, or reverse his determination and furnish the complaining party a written notification of his decision and the reasons therefor. The decision of the executive director shall be final and not subject to further review.

(2) If the executive director determines that an inspection is not warranted because the requirements of Section 1 of this regulation have not been met, he shall notify the complaining party in writing of such determination. Such determination shall be without prejudice to the filing of a new complaint meeting the requirements of Section 1 of this regulation.

**803 KAR 2:095**  
**TRADE SECRETS**

**Section 1.** KRS 338.171 states that "all information obtained by the executive director in connection with any inspection or proceeding under this chapter which might reveal a trade secret shall be considered confidential except that such information may be disclosed to those persons concerned with carrying out this chapter or when relevant in any proceedings under this chapter. In any such proceedings, the executive director, review commission, or courts shall issue such orders as may be appropriate to protect the confidentiality of trade secrets."



## **803 KAR 2:100**

### **IMMINENT DANGER**

#### **Section 1. Imminent Danger.**

Whenever and as soon as a compliance safety and health officer concludes on the basis of an inspection that conditions or practices exist in any place of employment which could reasonably be expected to cause death or serious physical harm immediately or before the imminence of such danger can be eliminated through the enforcement procedures otherwise provided by KRS Chapter 338, he shall inform the affected employees and employers of the danger and that if the imminent danger is not immediately abated he is recommending a civil action to restrain such conditions or practices and for other appropriate relief in accordance with the provisions of KRS 338.133. Appropriate citations and notices of proposed penalties may be issued with respect to an imminent danger even though, after being informed of such danger by the compliance safety and health officer, the employer immediately eliminates the imminence of the danger and initiates steps to abate such danger.

## **803 KAR 2:110**

### **EMPLOYER AND EMPLOYEE REPRESENTATIVES**

#### **Section 1. Representatives of Employers and Employees.**

(1) Compliance safety and health officers shall be in charge of inspections and questioning of persons. A representative of the employer and a representative authorized by his employees shall be given an opportunity to accompany the compliance safety and health officer. The compliance safety and health officer may permit additional employer representatives and additional representatives authorized by employees to accompany him where he determines that such additional representatives will further aid the inspection. A different employer and employee representative may accompany the compliance safety and health officer during each different phase of an inspection if this will not interfere with the conduct of the inspection.

(2) Compliance safety and health officers shall have authority to resolve all disputes as to who is the representative authorized by the employer and employees for the purpose of this section. If there is no authorized representative of employees, or if the compliance safety and health officer is unable to determine with reasonable certainty who is such representative, he shall consult with a reasonable number of employees concerning matters of safety and health in the workplace.

(3) The representative(s) authorized by employees shall be an employee(s) of the employer. However, if in the judgment of the compliance safety and health officer, good cause has been shown why accompaniment by a third party who is not an employee of the employer (such as an industrial hygienist or a safety engineer) is reasonably necessary to the conduct of an effective and thorough physical inspection of the workplace, such third party may accompany the compliance safety and health officer during the inspection.

(4) Compliance safety and health officers may consult with employees concerning matters of occupational safety and health to the extent they deem necessary for the conduct of an effective and thorough inspection. During the course of an inspection, any employee shall be afforded an opportunity to bring any violation of KRS Chapter 338 which he has reason to believe exists in the workplace to the attention of the compliance safety and health officer.

(5) Compliance safety and health officers are authorized to deny the right of accompaniment under this section to any person whose conduct interferes with a fair and orderly inspection. The right of accompaniment in areas containing trade secrets shall be subject to KRS 338.171. With regard to information classified by an agency of the United States Government in the interest of national security, only persons authorized to have access to such information may accompany a compliance safety and health officer in areas containing such information.

## **803 KAR 2:120**

### **CITATIONS**

**Section 1. Citations.** The Executive Director, Office of Occupational Safety and Health shall review the inspection report of the compliance safety and health officer. If, on the basis of the report the executive director believes that the employer has violated a requirement of KRS Chapter 338, or any standard, rule or order promulgated pursuant to KRS Chapter 338, he shall issue to the employer a citation indicating the violations. An appropriate citation shall be issued even though after being informed of an alleged violation by the compliance safety and health officer, the employer immediately abates, or initiates steps to abate, such alleged violation. Any citation shall be issued with reasonable promptness after termination of the inspection.

**Section 2. Content of Citation.** A citation shall describe with particularity the nature of the alleged violation, including a reference to the provision(s) of KRS Chapter 338, standard, rule, regulation, or order alleged to have been violated. Any citation shall also fix a reasonable time or times for the abatement of the alleged violation.

**Section 3. Citations Issued for Requested Inspections.** If a citation is issued for a violation alleged in request for inspection under 803 KAR 2:090, Section 1(1), or a notification of violation under 803 KAR 2:090, Section 1(3), a copy of the citation shall also be sent to the employee or representative of employees who made such request or notification.

**Section 4. Informal Review of Inspection.** After an inspection, if the executive director determines that a citation is not warranted with respect to a danger or violation alleged to exist in a request for inspection under 803 KAR 2:090, Section 1(1), or a notification of violation under 803 KAR 2:090, Section 1(3), the informal review procedures prescribed in 803 KAR 2:090, Section 2, shall be applicable. After considering all views presented, the executive director shall either affirm his determination, order a reinspection, or issue a citation if he believes that the inspection disclosed a violation. The executive director shall furnish the complaining party and the employer with written notification of his determination and the reasons therefor. The determination of the executive director shall be final and not subject to review.

**Section 5. Citation.** Every citation shall state that the issuance of a citation does not constitute a finding that a violation of KRS Chapter 338, or any standard, rule, order or regulation filed pursuant thereto, has occurred unless there is a failure to contest as provided for in KRS Chapter 338 or, if contested, unless the citation is affirmed by the review commission.

## **803 KAR 2:122**

### **APPLICATION FOR EXTENSION OF ABATEMENT**

**Section 1.** An employer may make application for extension of abatement date with the Executive Director, Office of Occupational Safety and Health or his designee, the Director of Compliance, when the employer has made a good faith effort to comply with the abatement requirements of a citation, but abatement has not been completed due to factors reasonably beyond his control. Where application for extension of abatement is made, said application shall be filed not later than the close of the day on which abatement was originally required. A later filed petition shall be accompanied by the employer's statement of exceptional circumstances explaining the delay.

**Section 2.** An application for extension of abatement may be in writing or may be made orally where time does not permit a writing. Where application for extension of abatement is made orally a written application shall follow said oral request within three (3) working days. The application shall include the following information:

- (1) All steps taken by the employer, and the dates of such action, in an effort to achieve compliance during the prescribed abatement period.
- (2) The specific additional abatement time necessary in order to achieve compliance.
- (3) The reasons such additional time is necessary, including the unavailability of professional and technical personnel or materials and equipment, or because necessary construction or alteration of facilities cannot be completed by the original abatement date.
- (4) All available interim steps being taken to safeguard the employees against the cited hazard during the abatement period.

**Section 3.** The Executive Director, Office of Occupational Safety and Health or his designated representative, the Director of Compliance, shall rule on the application for extension of abatement within three (3) days of receipt of same.

- (1) Where extension is granted, amended citation shall issue and the employer shall post the amended citation at or near the same location as the original citation as under 803 KAR 2:125. Adversely affected employees may appeal pursuant to KRS 338.141(1) and rules of the KOSHRC.
- (2) Where extension is denied, adversely affected employers shall have right of appeal as under KRS 338.141(1) and rules of the KOSHRC.

**Section 4.** Where jurisdiction of the Review Commission has expired, the Executive Director, Office of Occupational Safety and Health shall again assume authority to modify abatement under KRS 338.141(2).

## **803 KAR 2:125**

### **POSTING OF CITATIONS**

#### **Section 1. Posting of Citations.**

- (1) Upon receipt of any citation under KRS Chapter 338, the employer shall immediately post such citation, or a copy thereof, unedited, at or near each place an alleged violation referred to in the citation occurred, except as provided below. Where, because of the nature of the employer's operations, it is not practicable to post the citation at or near each place of alleged violation, such citation shall be posted, unedited, in a prominent place where it will be readily observable by all affected employees. For example, where employers are engaged in activities which are physically dispersed (see 803 KAR 2:060) the citation may be posted at the location to which employees report each day. Where employees do not primarily work at or report to a single location (see 803 KAR 2:060) the citation may be posted at the location from which the employees operate to carry out their activities. The employer shall take steps to ensure that the citation is not altered, defaced, or covered by other material which would obscure the citation. Notices of de minimis violations need not be posted.
- (2) Each citation, or a copy thereof, shall remain posted until the violation has been abated, or for three (3) working days, whichever is later. The filing by the employer of a notice of intention to contest shall not affect his posting responsibility under this section unless and until the review commission issues a final order vacating the citation.
- (3) An employer to whom a citation has been issued may post a notice in the same location where such citation is posted indicating that the citation is being contested before the review commission, and such notice may explain the reasons for such contest. The employer may also indicate that specified steps have been taken to abate the violation.
- (4) Any employer failing to comply with the provisions of subsections (1) and (2) of this section shall be subject to citation and penalty of \$100 per first instance per authority of KRS 338.991.

**803 KAR 2:127**  
**FAILURE TO CORRECT VIOLATION, ADDITIONAL PENALTY**

**Section 1.** If an inspection discloses that an employer has failed to correct an alleged violation for which a citation has been issued within the period permitted for its correction, the district supervisor shall consult with the Director of Compliance who may consult with the general counsel, if appropriate, and he shall notify the employer by certified mail or by personal service by the compliance safety and health officer of such failure and of the additional penalty proposed under KRS 338.991(4) by reason of such failure. The period for the correction of a violation for which a citation has been issued shall not begin to run until the entry of a final order of the review commission in the case of any review proceedings initiated by the employer in good faith and not solely for delay or avoidance of penalties.

**Section 2.** Any employer receiving a notification of failure to correct a violation and of proposed additional penalty authorized by KRS 338.991(4) may notify the Director of Compliance in writing that he intends to contest such notification or proposed additional penalty before the review commission. Such notice of intention to contest shall be postmarked within fifteen (15) working days of the receipt by the employer of the notification of failure to correct a violation and of proposed additional penalty. The Director of Compliance shall immediately transmit such notice to the review commission in accordance with the rules of procedure prescribed by the commission.

**Section 3.** Each notification of failure to correct a violation and of proposed additional penalty shall state that it shall be deemed to be the final order of the review commission and not subject to review by any court or agency unless, within fifteen (15) working days from the date of receipt of such notification, the employer notifies the Director of Compliance in writing that he intends to contest the notification or the proposed additional penalty before the review commission.

## **803 KAR 2:130**

### **INFORMAL CONFERENCES**

#### **Section 1. Informal Conferences.**

At the request of an affected employer, employee or representative of employees, the Executive Director, Office of Occupational Safety and Health may hold an informal conference for the purpose of discussing any issues raised by an inspection, citation, notice of proposed penalty, variance, or notice of intention to contest. The settlement of any issue at such conference shall be subject to the rules of procedure prescribed by the review commission. If the conference is requested by the employer, an affected employee or his representative shall be afforded an opportunity to participate at the discretion of the executive director. If the conference is requested by an employee or representative of employees, the employer shall be afforded an opportunity to participate, at the discretion of the commissioner. Any party may be represented by counsel at such conference. No such conference or request for such conference shall operate as a stay of any fifteen (15) working-day period for filing a notice of intention to contest as prescribed in 803 KAR 2:140.

**803 KAR 2:140**  
**EMPLOYER AND EMPLOYEE CONTESTS**

**Section 1. Contesting Procedure.**

(1) Any employer to whom a citation or notice or penalty has been issued may, under KRS Chapter notify the Executive Director, Office of Occupational Safety and Health in writing that he intends to contest such citation, or notice of proposed penalty before the review commission. Such notice of intention to contest shall be postmarked within fifteen (15) working days of the receipt by the employer of the notice of proposed penalty. Every notice of intention to contest shall specify whether it is directed to the citation, the proposed penalty, or a variance. The executive director shall immediately transmit such notice to the review commission in accordance with the rules of procedure prescribed by the commission.

(2) Any employee or representative of employees of an employer to whom a citation has been issued may:

(a) File a written notice with the executive director alleging that the period of time fixed in the citation for the abatement of the violation is unreasonable;

(b) File a written notice to the executive director alleging that the citation and penalties are unreasonable. Such notices shall be postmarked within fifteen (15) working days of the receipt by the employer of the notice of proposed penalty or notice that no penalty is being proposed. The executive director shall immediately transmit such notice to the review commission in accordance with the rules of procedure prescribed by the commission.

(3) If any party is adversely affected by a variance issued under KRS 338.151 he may file an appeal to the review commission.



**803 KAR 2:180**  
**RECORDKEEPING; REPORTING; STATISTICS**

**Section 1. Definitions.**

- (1) **“Amputation”** means an injury in which a portion of the body including bone tissue is removed.
- (2) **“Employee”** is defined by KRS 338.015(2).
- (3) **“Employer”** is defined by KRS 338.015(1).
- (4) **“Occupational Safety and Health Act”** means KRS Chapter 338.
- (5) **“Secretary of Labor”** means the Secretary of the United States Department of Labor or the Secretary of the Labor Cabinet.
- (6) **“Section 11(c) of the Act”** means KRS 338.121(3).

**Section 2.** Employers shall comply with the reporting and recording of occupational injuries and illnesses established at 29 CFR Part 1904, revised as of July 1, 2008, as amended by the definitions in Section 1 and the requirements in Section 3 of this administrative regulation.

**Section 3. Reporting fatalities, amputations, or in-patient hospitalizations.**

(1) Employers shall orally report to the Kentucky Labor Cabinet, Division of Occupational Safety and Health Compliance, at (502) 564-3070, any work-related incident which results in the following:

- (a) The death of any employee; or
- (b) The hospitalization of three (3) or more employees.

(2) The report required under subsection (1) of this section shall be made within eight (8) hours from when the incident is reported to the employer, the employer’s agent, or another employee. If the employer cannot speak with someone in the Frankfort office, the employer shall report the incident using the OSHA toll-free, central telephone number, 1-800-321-OSHA (1-800-321-6742).

(3) Employers shall orally report to the Kentucky Labor Cabinet, Division of Occupational Safety and Health Compliance, at (502) 564-3070, any work-related incident which results in the following:

- (a) An amputation suffered by an employee; or
- (b) The hospitalization of fewer than three employees within seventy-two (72) hours following the incident.

(4) The report required under subsection (3) of this section shall be made within seventy-two (72) hours from when the incident is reported to the employer, the employer’s agent, or another employee.

**803 KAR 2:220**  
**EMPLOYEES REFUSAL TO WORK**

**Section 1. Employee Refusal to Work.**

(1) Where an employee is confronted with a choice between not performing assigned tasks or being subjected to death or serious injury arising from a dangerous condition at the workplace, such employee may refuse in good faith to expose himself/herself to the dangerous condition. The condition causing the employee's apprehension of death or injury must be of such a nature that a reasonable person under the same or similar circumstances then confronting the employee would conclude that there is a real danger of death or serious injury and that there is insufficient time, due to the urgency of the situation, to eliminate the danger through resort to regular statutory enforcement channels. In addition, in such circumstances, the employee, where possible, must also have sought corrective action from his/her employer, and been unable to obtain a correction of the dangerous condition.

(2) When an employee in good faith refuses to expose himself/herself to a dangerous condition at the workplace he/she shall not be subjected to subsequent discrimination by the employer.

(3) Provided, however, that the provisions of this regulation shall not apply if it is found that the employee acted unreasonably or in bad faith.

**803 KAR 2:230**  
**PAY DURING INSPECTION ACTIVITIES**

**Section 1.** Employees, when on regular duty time, shall be paid at their regular rate of pay during the conduct of walk-around inspections and other inspection related activities such as responding to questions of compliance officers, or participating in opening and closing conferences. An employer's failure to pay employees for time engaged in these activities is discriminatory under KRS 338.121(3).

**803 KAR 2:240**  
**TIME FOR FILING DISCRIMINATION COMPLAINT**

**Section 1. Reasonable Time Defined.**

A reasonable time as used in KRS 338.121(3)(b) shall be defined to be no more than 120 days for the purpose of filing a complaint with the Executive Director of the Office of Occupational Safety and Health.

## **803 KAR 2:250 DISCRIMINATION**

### **Section 1. Definitions.**

Unless defined herein, all definitions will be as defined in 803 KAR 50:010 and KRS 338.015.

- (1) **"Secretary"** means the Executive Director, Office of Occupational Safety and Health.
- (2) **"Commissioner"** means the Commissioner of the Kentucky Department of Labor under the direction and supervision of the Secretary of the Environmental and Public Protection Cabinet.
- (3) **"Affected employee"** means any employee discharged or otherwise discriminated against by any person because such employee has filed a complaint or has participated or testified, or is about to participate or testify in any investigation with the Department of Labor or proceeding before the Review Commission.
- (4) **"Prohibited activity"** means a wrongful discharge of an employee on the basis of his/her filing a complaint or participation in any investigation instituted by the Department of Labor or any proceeding before the Review Commission or any other discriminatory action such as but not limited to suspensions, written reprimands, demotions in positions taken against the employee for the above stated activities or for exercising any right afforded under KRS Chapter 338.

### **Section 2. Complaints; Recipient of; Time for Filing; Form of Complaints.**

- (1) Any employee may file a complaint of discrimination of protected activity with the executive director or his designee. Such complaint may be made orally or in writing.
- (2) Complaints shall be filed within 120 days of the occurrence of the alleged violation of protected activity.
- (3) Complaints shall state name and address of affected employee, name and address of employer, and description of alleged violation.
- (4) Notification shall be given to the employer of the receipt by the executive director of a complaint within five (5) working days.

### **Section 3. Settlement.**

Settlement is encouraged at any stage of the proceedings where such settlement is consistent with the provisions and objectives of the Act. Primary consideration will be the reinstatement of employee to former position with back pay and assurance of the future protection of the rights of all employees under KRS Chapter 338.

**Section 4. Withdrawal of Complaint.**

Any request by an employee to withdraw a complaint filed with the executive director will be given substantial weight; however, the executive director will make the final determination as to whether a complaint and subsequent investigation will be terminated.

**Section 5. Arbitration or Other Agency Proceedings.**

(1) An employee who files a complaint under KRS 338.121(3) may also pursue remedies under grievance arbitration proceedings in collective bargaining agreements. In addition, the complainant may concurrently resort to other agencies for relief, such as the National Labor Relations Board. The executive director's jurisdiction to entertain KRS 338.121(3) complaints, to investigate, and to determine whether discrimination has occurred, is independent of the jurisdiction of other agencies or bodies. The executive director may investigate and issue citations against any party found in violation regardless of the pendency or determination of other proceedings.

(2) Where a complainant is pursuing remedies, other than those provided by KRS 338.121, postponement of the executive director's determination and deferral to the results of such proceedings may be made.

**Section 6. Investigation of Complaint; Issuance of Citation; Notice to Parties; Right of Review.**

(1) Upon receipt of a complaint under Section 2 of this regulation the executive director shall cause an investigation to be instituted. Such investigation shall be completed and the executive director's determination issued within a reasonable time, but not to exceed ninety (90) days, absent extenuating circumstances.

(2) If the executive director finds a violation of KRS 338.121 he shall issue a citation and recommended penalty. The citation shall include a determination by the executive director as to the merits of the alleged violation.

(3) Notice of the determination shall be given to all affected parties.

(4) In the event the executive director determines there has been no discriminatory action, the employee may petition the commissioner for a review of the determination. Such petition shall be in writing and state reasons why review is requested. The commissioner shall affirm the determination or remand it to the executive director for further investigation.

**Section 7. Employer Contest.**

Any citation and notice of proposed penalty shall state that it shall be deemed to be the final order of the Review Commission and not subject to review by any court or agency unless, within fifteen (15) working days from the date of receipt of such notice, the employer notifies the Executive Director, Office of Occupational Safety and Health in writing that he intends to contest the citation and notification of proposed penalty before the Review Commission. Within seven (7) days of receipt of contest the executive director will forward copies of the citation and proposed penalty and notice of contest to the Review Commission.

**Section 8. Receipt by Review Commission of Citation and Notice of Contest.**

Proceedings under 803 KAR 50:010(1). Upon receipt by the commission of the citation and proposed penalty and employer's notice of contest, the commission shall institute proceedings in compliance with the applicable rules as adopted by the Review Commission in 803 KAR 50:010.

**Section 9. Proposed Penalties.**

(1) Concurrent with the issuance of a citation, the executive director shall notify the employer by certified mail of the proposed penalty under KRS 338.991.

(2) The executive director shall determine the amount of any proposed penalty, giving due consideration to the appropriateness of the penalty with respect to the size of the business of the employer being charged, the gravity of the violation, the good faith of the employer and the history of previous violations.

(3) Appropriate penalties shall be proposed with respect to an alleged discriminatory act even though after being informed of such alleged violation by the executive director, the employer immediately abates, or initiates steps to abate, such alleged violation.

## **PART 2 State Specific Regulations Applicable to General Industry**

### **803 KAR 2:015 GENERAL INDUSTRY STANDARDS**

#### **Section 1. Batteries.**

Changing and charging storage batteries (for automotive-type battery charging installations, in-vehicle charging of batteries, and battery jump starting of vehicles):

(1) Facilities shall be provided for flushing electrolyte from the eyes and skin with water when changing or charging storage batteries. An adequate water supply shall be within twenty-five (25) feet of the work area.

(2) No battery shall be charged or discharged within a closed or unvented container. The batteries shall be charged:

- (a) In the open; or
- (b) In a mechanically-ventilated space; or
- (c) In a space providing at least twenty (20) cubic feet per ampere of charging capacity.

(3) A face shield or goggles shall be provided and available at each charging unit. The use of the face shield or goggles shall be required for connection and disconnection of vehicle or charger leads to the battery terminals and for the addition or pouring of electrolyte.

(4) Employees shall wear face shields or goggles during installation and removal of batteries from vehicles, while connecting and disconnecting battery charger or jumper cable leads, and while handling electrolyte.

(5) Employees shall be instructed to:

- (a) Turn off the battery charger to connect or disconnect the battery;
- (b) Wash acid spills immediately; and
- (c) Flush electrolyte from eyes and skin with water for ten (10) minutes.

#### **Section 2. Electrical Testing.**

(1) Definitions.

- (a) Disconnected means disconnected from any electrical source of supply;
- (b) Guarded: protected by personnel, covered, fenced, or enclosed by means of suitable castings, barrier, rails, screens, mats, platforms, or other suitable devices in accordance with standard barricading techniques designed to prevent dangerous approach or contact by



persons or objects. (Note: Wires, which are insulated but not otherwise protected, are not considered as guarded);

(c) Hold cards (also called "hold tags"): a card or tag-type device, usually having a predominant color of white or red which warns against or which cautions against the operation of a particular switch, device, circuit, tool, machine, etc.;

(d) Near: a distance no closer than that shown in the table in subsection (3)(c) of this section;

(e) Qualified person: a person who, because of experience and training is familiar with the construction and operation of the apparatus or equipment and the hazards involved in the performance of the job.

(2) Purpose.

(a) The intent and purpose of this regulation is to provide and establish safety procedures for testing equipment to protect electrical workers from hazards resulting from exposure to high voltage;

(b) This regulation shall apply to nonutility electrical workers who are engaged in electrical construction or maintenance of electrical conductors and equipment rated at 600 volts and above.

(3) Energized conductors and equipment.

(a) Only qualified employees shall work on or near high voltage conductors or equipment;

(b) Personal protective equipment shall be provided by the employer and used by the employee when working on or near energized, ungrounded high voltage conductors or equipment;

(c) No employee shall approach or take any conductive object, without an approved insulating handle, within the minimum distance specified in the table below, unless the energized part is insulated or guarded from the employee, or the employee is effectively insulated from the live parts. Rubber gloves (sleeves if necessary) rated for the voltage involved shall be considered effective insulation of the employee from the energized part.

**Minimum Clear Distance From Live Parts**

Voltage Phase to Phase (Kilovolts)	Distance Phase to Employee
0.6 to 34.5	2'
34.5 to 46	2 1/2'
46 to 69	3'
69 to 115	3' 4"
115 to 138	3' 6"
138 to 169	3' 8"

(4) Deenergized conductor or equipment.

- (a) Existing conditions shall be determined before starting work on electrical conductor and/or equipment;
- (b) Before any work is performed, all electrical switches, breakers and associated disconnecting devices shall be opened, made inoperable and hold tagged out by the person in charge. Employees shall be trained and thoroughly instructed in the tagging procedure. One (1) qualified person, for example: foreman, general foreman or first class electrician, of each crew shall be responsible for attaching hold tags and/or hold cards to the disconnecting means. When more than one (1) crew is involved in the work, multiple hold tags or hold cards shall be placed in the handle of the disconnecting equipment. The use of such tags must be respected. Equipment or items so tagged must not be activated or used without full and proper authority of a responsible person whose signature appears on the tag;
- (c) Conductors shall be short-circuited and grounded wherever possible;
- (d) Capacitors may be components of apparatus of the disconnected electrical system. Before employees are allowed to work, the capacitors shall be discharged, short-circuited and grounded;
- (e) When deenergizing conductors and equipment and the means of disconnecting from the energy source is not visible open, a voltage test shall be made before starting work. An operational check shall be made of the voltage tester prior to and following the voltage test to determine reliability of the testing device. The test device must be handled and used while wearing or using approved protective equipment during the test;
- (f) All conductors and equipment shall be treated as energized until tested, short circuited and effectively grounded except when the circuit involved is isolated from all possible sources of energizing voltage from another circuit, induced voltage or back feed;
- (g) The voltage condition of deenergized conductors and/or equipment shall be determined with testing equipment designed for the applicable voltage;
- (h) Upon completion of work on deenergized conductors and equipment, the person responsible shall ascertain that all employees under his jurisdiction are clear and that all protective short circuit and grounding lines are removed. The qualified person(s) shall then remove his hold tag(s). Only at this time shall conductors and equipment be reenergized.

### **Section 3. Safety Belts, Lanyards and Life Lines.**

- (1) Employees working from open-sided unguarded floors, pipe racks, and ledges, platforms, walkways, machinery, stock shelves, or similar unguarded working surfaces which are elevated ten (10) feet or more above a lower level shall be secured by safety belts and lanyards, life lines where necessary, or shall be protected by safety nets.
- (2) Lanyards shall have a nominal breaking strength of 5,400 lbs. The combination of safety belts and lanyards, life lines where necessary, shall be designed to permit a fall of not more than five (5) feet.
- (3) All safety belt and lanyard hardware, except rivets, shall be capable of withstanding a tensile loading of 4,000 lbs. without cracking, breaking or taking a permanent deformation.
- (4) Life lines, where necessary, shall be secured above the point of operation to an anchorage of structural member capable of supporting a minimum dead weight of 5,400 lbs.

(5) This standard shall not preempt any applicable standard now in effect.

**Section 4. Off-Highway Motor Vehicles and Equipment.**

(1) General requirements.

(a) Heavy machinery, equipment, or parts thereof, which are suspended or held aloft by use of slings, hoists, or jacks shall be substantially blocked or cribbed to prevent falling or shifting before employees are permitted to work under or between them. Bulldozers and scraper blades, end-loader buckets, dump bodies, and similar equipment, shall be either fully lowered or blocked when being repaired or when not in use. All controls shall be in a neutral position, with the motors stopped and brakes set, unless work being performed requires otherwise.

(b) Whenever the equipment is parked, the parking brake shall be set. Equipment parked on inclines shall have the wheels chocked and the parking brake set.

(c) All cab glass shall be safety glass, or equivalent, that introduces no visible distortion affecting the safe operation of any machine covered by this subpart.

(d) All equipment covered by this subpart shall comply with the requirements of 29 CFR 1910.180(j)(1) when working or being moved in the vicinity of power lines or energized transmitters.

(2) Motor vehicles.

(a) Coverage. Motor vehicles as covered by this part are those vehicles that operate within an off-highway job site. The requirements of this section do not apply to equipment for which rules are prescribed in subsection (3) of this section.

(b) General requirements. All vehicles shall have a service brake system, an emergency brake system, and a parking brake system. These systems may use common components, and shall be maintained in operable condition.

(c) Whenever visibility conditions warrant additional light, all vehicles, or combinations of vehicles, in use shall be equipped with at least two (2) headlights and two (2) taillights in operable condition.

(d) All vehicles, or combination of vehicles, shall have brake lights in operable condition regardless of light conditions.

(e) All vehicles shall be equipped with an adequate audible warning device at the operator's station and in an operable condition.

(f) No employer shall use any motor vehicle equipment having an obstructed view to the rear unless:

1. The vehicle has a reverse signal alarm audible above the surrounding noise level; or
2. The vehicle is backed up only when an observer signals that it is safe to do so.

(g) All vehicles with cabs shall be equipped with windshields and powered wipers. Cracked and broken glass shall be replaced. Vehicles operating in areas or under conditions that cause fogging or frosting of the windshields shall be equipped with operable defogging or defrosting devices.

(h) All haulage vehicles, whose pay load is loaded by means of cranes, power shovels, loaders, or similar equipment, shall have a cab shield and/or canopy adequate to protect the operator from shifting or falling materials.

(i) Tools and material shall be secured to prevent movement when transported in the same compartment with employees.

(j) Vehicles used to transport employees shall have seats firmly secured and adequate for the number of employees to be carried.

(k) The employer will provide and insure the use of seat belts and anchorages meeting the requirements of 49 CFR Part 571 (Department of Transportation, Federal Motor Vehicle Safety Standards).

(l) Trucks with dump bodies shall be equipped with positive means of support, permanently attached, and capable of being locked in position to prevent accidental lowering of the body while maintenance or inspection work is being done.

(m) Operating levers controlling hoisting or dumping devices on haulage bodies shall be equipped with a latch or other device which will prevent accidental starting or tripping of the mechanism.

(n) Trip handles for tailgates of dump trucks shall be so arranged that, in dumping, the operator will be in the clear.

(o) Each employer shall assure that the following parts, equipment, and accessories are in safe operating condition and free of apparent damage that could cause failure while in use: service brakes, including trailer brake connections; parking system (hand brake); emergency stopping system (brakes); tires; horn; steering mechanism; coupling devices; seat belts; operating controls; and safety devices. All defects shall be corrected before the vehicle is placed in service. These requirements also apply to equipment such as lights, reflectors, windshield wipers, defrosters, fire extinguishers, etc., where such equipment is necessary.

### (3) Material handling equipment.

(a) Equipment; general. These rules apply to the following types of equipment: scrapers, loaders, crawler or wheel tractors, bulldozers, off-highway trucks, graders, agricultural and industrial tractors, and similar equipment. The promulgation of specific rules for compactors and rubber-tired "skid-steer" equipment is reserved pending consideration of standards currently being developed.

(b) Seating and seat belts. Each employer shall insure safe seating with seat belts on all equipment covered by this section, and shall meet the requirement of J386, Society of Automotive Engineers Handbook, 1986, Seat Belts for Construction Equipment. Seat belts for agricultural and light industrial tractors shall meet the seat belt requirements of Society of Automotive Engineers J1194, Society of Automotive Engineers Handbook, 1986, Operator

Protection for Agricultural and Light Industrial Tractors.

(c) Seat belts need not be provided for equipment which is designed only for stand-up operation.

(d) Seat belts need not be provided for equipment which does not have rollover protective structure (ROPS) or adequate canopy protection.

(e) Brakes. All equipment mentioned in subsection (a) of this section shall have a service braking system capable of stopping and holding the equipment fully loaded, as specified in Society of Automotive Engineers SAE J237, Loader Dozer, Society of Automotive Engineers Handbook, 1986, J236, Graders, Society of Automotive Engineers Handbook, 1986, and J319b, Scrapers, Society of Automotive Engineers Handbook, 1986. Brake systems for self-propelled rubber-tired off-highway equipment manufactured after January 1, 1987 shall meet the applicable minimum performance criteria set forth in the following Society of Automotive Engineers Recommended Practices:

Self-propelled Scrapers . . . . . SAE J319B, Society of Automotive Engineers Handbook, 1986.

Self-propelled Graders . . . . . SAE J236, Society of Automotive Engineers Handbook, 1986.

Trucks and Wagons . . . . . SAE J166, Society of Automotive Engineers Handbook, 1986.

Front-end Loaders & Dozers . . . . SAE J237, Society of Automotive Engineers Handbook, 1986.

(f) Rollover protective structures for off-highway trucks. The promulgation of standards for rollover protective structures for off-highway trucks is reserved pending further study and development.

(g) Audible alarms.

1. All bidirectional machines, such as rollers, compactors, front-end loaders, bulldozers, and similar equipment, shall be equipped with a horn, distinguishable from the surrounding noise level, which shall be operated as needed when the machine is moving in either direction. The horn shall be maintained in an operative condition.

2. No employer shall permit material handling equipment or compacting equipment which has an obstructed view to the rear to be used in reverse gear unless the equipment has in operation a reverse signal alarm distinguishable from the surrounding noise level or an employee signals that it is safe to do so.

(h) Scissor points. Scissor points on all front-end loaders, which constitute a hazard to the operator during normal operation, shall be guarded.

## **Section 5. Rollover Protective Structures; Overhead Protection.**

(1) Rollover protective structure (ROPS) for material handling equipment.

(a) Coverage. This section applies to the following types of material handling equipment: To all rubber-tired, self-propelled scrapers, rubber-tired front-end loaders, rubber-tired dozers, wheel-type agricultural and industrial tractors, crawler tractors, crawler-type loaders, and motor graders, with or without attachments, that are used in general industry work. This requirement does not apply to sideboom pipe-laying tractors.

(b) The promulgation of specific standards for rollover protective structures for compactors and rubber-tired skid-steer equipment is reserved pending consideration of standards currently being developed.

(c) Equipment manufactured on or after January 1, 1987. Material handling machinery described in paragraph (a) of this subsection and manufactured on or after January 1, 1987, shall be equipped with rollover protective structures which meet the minimum performance standards prescribed in subsections (2) and (3) of this section as applicable.

(d) Equipment manufactured before January 1, 1987. All material handling equipment described in paragraph (a) of this subsection and manufactured or placed in service (owned or operated by the employer) prior to January 1, 1987, shall be fitted with rollover protective structures no later than January 1, 1988. Machines manufactured before July 1, 1969: Reserved pending further study, development, and review.

(e) Rollover protective structures and supporting attachment shall meet the minimum performance criteria detailed in subsections (2) and (3) of this section, as applicable or shall be designed, fabricated, and installed in a manner which will support, based on the ultimate strength of the metal, at least two (2) times the weight of the prime mover applied at the point of impact.

(f) The design objective shall be to minimize the likelihood of a complete overturn and thereby minimize the possibility of the operator being crushed as a result of a rollover or upset.

(g) The design shall provide a vertical clearance of at least fifty-two (52) inches from the work deck to the ROPS at the point of ingress or egress.

(h) Remounting. ROPS removed for any reason, shall be remounted with equal quality, or better, bolts or welding as required for the original mounting.

(i) Labeling. Each ROPS shall have the following information permanently affixed to the structure:

1. Manufacturer or fabricator's name and address;
2. ROPS model number, if any;
3. Machine make, model, or series number that the structure is designed to fit.

(j) Machines meeting certain existing governmental requirements. Any machine in use, equipped with rollover protective structures, shall be deemed in compliance with this subsection if it meets the rollover protective structure requirements of the state of California, the U.S. Army Corps of Engineers, or the Bureau of Reclamation of the U.S. Department of the Interior in effect on April 5, 1972. The requirements in effect are:

1. State of California: Construction Safety Orders, issued by the Department of Industrial Relations pursuant to Division 5, Labor Code, §6312, state of California.
2. U.S. Army Corps of Engineers: General Safety Requirements, EM-385-1-1 (March 1967).

3. Bureau of Reclamation, U.S. Department of the Interior: Safety and Health Regulations for Construction. Part II (September 1971).

(2) Minimum Performance Criteria for Rollover Protective Structures for Designated Scrapers, Loaders, Dozers, Graders, and Crawler Tractors.

(a) General. This section prescribes minimum, performance criteria for rollover protective structures (ROPS) for rubber-tired self-propelled scrapers; rubber-tired front-end loaders and rubber-tired dozers; crawler tractors, crawler-type loaders, and motor graders. The vehicle and ROPS as a system shall have the structural characteristics prescribed in paragraph (f) of this subsection for each type of machine described in this paragraph.

(b) The static laboratory test prescribed herein will determine the adequacy of the structures used to protect the operator under the following conditions:

1. For rubber-tired self-propelled scrapers, rubber-tired front-end loaders, and rubber-tired dozers: operating between zero and ten (10) miles per hour over hard clay where rollover would be limited to a maximum roll angle of 360 degrees down a slope of thirty (30) degrees maximum.
2. For motor graders: operating between zero and ten (10) miles per hour over hard clay where rollover would be limited to 360 degrees down a slope of thirty (30) degrees maximum.
3. For crawler tractors and crawler-type loaders: operating between zero and ten (10) miles per hour over hard clay where rollover would be limited to a maximum roll angle of 360 degrees down a slope of forty-five (45) degrees.

(c) Facilities and apparatus.

1. The following material is necessary:
  - a. Material, equipment, and tie-down means adequate to insure that the ROPS and its vehicle frame absorb the applied energy.
  - b. Equipment necessary to measure and apply loads to the ROPS. Adequate means to measure deflections and lengths should also be provided.
  - c. Recommended, but not mandatory, types of test setups are illustrated in Figure W-1 for all types of equipment to which this section applies; and in Figure W-2 for rubber-tired self-propelled scrapers; Figure W-3 for rubber-tired front-end loaders, rubber-tired dozers, and motor graders; and Figure W-4 for crawler tractors and crawler-type loaders.
2. Table W-1 contains a listing of the required apparatus for all types of equipment described in paragraph (a) of this subsection.

**TABLE W-1**

Means to Measure	Accuracy
Deflection of ROPS, inches	+5% of deflection measured.
Vehicle weight, pounds	+5% of the weight measured.
Force applied to frame pounds	+5% of force measured.
Dimensions of critical zone	+0.5 inches.

(d) Vehicle conditions. The ROPS to be tested must be attached to the vehicle structure in the same manner as it will be attached during vehicle use. A totally assembled vehicle is not required. However, the vehicle structure and frame which support the ROPS must represent the actual vehicle installation. All normally detachable windows, panels, or nonstructural fittings shall be removed so that they do not contribute to the strength of the ROPS.

(e) Test procedure. The test procedure shall include the following, in the sequence indicated:

1. Energy absorbing capabilities of ROPS shall be verified when loaded laterally by incrementally applying a distributed load to the longitudinal outside top member of the ROPS, as shown in Figure W-1, W-2, or W-3, as applicable. The distributed load must be applied so as to result in approximately uniform deflection of the ROPS. The load increments should correspond with approximately five-tenths (0.5) inches ROPS deflection increment in the direction of the load application, measured at the ROPS top edge. Should the operator's seat be off-center, the load shall be applied on the off-center side. For each applied load increment, the total load (lb.) versus corresponding deflection (in.) shall be plotted, and the area under the load-deflection curve shall be calculated. This area is equal to the energy (in.-lb.) absorbed by the ROPS. For a typical load-deflection curve and calculation method, see Figure W-5. In Figure W-1, incremental loading shall be continued until the ROPS has absorbed the amount of energy and the minimum applied load specified under paragraph (f) of this subsection has been reached or surpassed. (See Figures for this section following the regulation.)

2. To cover the possibility of the vehicle coming to rest on its top, the support capability shall be verified by applying a distributed vertical load to the top of the ROPS so as to result in approximately uniform deflection (see Figure W-1). The load magnitude is specified in paragraph (f)2.a. of this subsection.

3. The low temperature impact strength of the material used in the ROPS shall be verified by suitable material tests or material certification (see paragraph (f)2.d. of this subsection).

(f) Performance requirements.

1. General performance requirements.

- a. No repairs or straightening of any member shall be carried out between each prescribed test.

- b. During each test, no part of the ROPS shall enter the critical zone as detailed in SAE J397b, Society of Automotive Engineers Handbook, 1986. Deformation of the ROPS shall not allow the plane of the ground to enter this zone.



2. Specific performance requirements.

a. The energy requirement for purposes of meeting the requirements of paragraph (e)1. of this subsection is to be determined by referring to the plot of the energy versus weight of vehicle (see Figure W-6 for rubber-tired self-propelled scrapers; Figure W-7 for rubber-tired front-end loaders and rubber-tired dozers; Figure W-8 for crawler tractors and crawler-type loaders; and Figure W-9 for motor graders). For purposes of this subsection, force and weight are measured as pounds (lb.); energy (U) is measured as inch-pounds.

b. The applied load must attain at least a value which is determined by multiplying the vehicle weight by the corresponding factor shown in Figure W-10 for rubber-tired self-propelled scrapers; in Figure W-11 for rubber-tired front-end loaders and rubber-tired dozers; in Figure W-12 for crawler tractors and crawler-type loaders; and in Figure W-13 for motor graders.

c. The load magnitude for purposes of compliance with paragraph (e)2. of this subsection is equal to the vehicle weight. The test of load magnitude shall only be made after the requirements of subparagraph 2.a. of this paragraph are met.

d. Material used in the ROPS must have the capability of performing at zero degrees Fahrenheit, or exhibit Charpy V notch impact strength of eight (8) foot-pounds at minus twenty (20) degrees Fahrenheit. This is a standard Charpy specimen as described in American Society of Testing and Materials A 370, Methods and Definitions for Mechanical Testing of Steel Products (available at the Central Office of the Kentucky Occupational Safety and Health Program). The purpose of this requirement is to reduce the tendency of brittle fracture associated with dynamic loading, low temperature operation, and stress raisers which cannot be entirely avoided on welded structures.

(g) Definitions. For purposes of this subsection, "vehicle weight" means the manufacturer's maximum weight of the prime mover for rubber-tired self-propelled scrapers. For other types of equipment to which this subsection applies, "vehicle weight" means the manufacturer's maximum recommended weight of the vehicle plus the heaviest attachment.

(h) Source of standard. This standard is derived from, and restates, the following Society of Automotive Engineers Recommended Practices: SAE J1349, Society of Automotive Engineers Handbook, 1986, Minimum Performance Criteria for Rollover Protective Structure for Rubber-tired, Self-propelled Scrapers; SAE J394, Society of Automotive Engineers Handbook, 1986, Minimum Performance Criteria for Rollover Protective Structure for Rubber-tired Front-end Loaders and Rubber-tired Dozers; SAE J395, Society of Automotive Engineers Handbook, 1986, Minimum Performance Criteria for Rollover Protective Structure for Crawler Tractors and Crawler-type Loaders; and SAE J396, Society of Automotive Engineers handbook, 1986, Minimum Performance Criteria for Rollover Protective Structures for Motor Graders. These recommended practices shall be resorted to in the event that questions of interpretation arise. The recommended practices appear in the 1986 SAE Handbook, which may be examined in the Central Office of the Kentucky Occupational Safety and Health Program.

(3) Protective Frame (ROPS) Test Procedures and Performance Requirements for Wheel-type Agricultural and Industrial Tractors Used in Construction.

(a) General.

1. The purpose of this section is to set forth requirements for frames for the protection of operators of wheel type agricultural and industrial tractors to minimize the possibility of operator injury resulting from accidental upsets during normal operation. With respect to agricultural and industrial tractors, the provisions of subsections (2) and (4) of this section for rubber-tired dozers and rubber-tired loaders may be utilized in lieu of the requirements of this section.
2. The protective frame which is the subject of this standard is a structure mounted to the tractor that extends above the operator's seat and conforms generally to Figure W-14.
3. If an overhead weather shield is attached to the protective frame, it may be in place during tests: provided, that it does not contribute to the strength of the protective frame. If such an overhead weather shield is attached, it must meet the requirements of paragraph (i) of this subsection.
4. For overhead protection requirements, see subsection (4) of this section.
5. If protective enclosures are used on wheel-type agricultural and industrial tractors, they shall meet the requirements of Society of Automotive Engineers Standard J1249, Society of Automotive Engineers Handbook, 1986, Protective Enclosures, Test Procedures, and Performance Requirements. This standard appears in the 1986 SAE Handbook and may be examined in the Central office of the Kentucky Occupational Safety and Health Program.

(b) Applicability. The requirements of this subsection apply to wheel-type agricultural tractors used in general industry work and to wheel-type industrial tractors used in general industry work. See paragraph (j) of this subsection for definitions of agricultural tractors and industrial tractors.

(c) Performance requirements.

1. Either a laboratory test or a field test is required in order to determine the performance requirements set forth in this paragraph.
2. A laboratory test may be either static or dynamic. The laboratory test must be under conditions of repeatable and controlled loading in order to permit analysis of the protective frame.
3. A field upset test, if used, shall be conducted under reasonably controlled conditions, both rearward and sideways to verify the effectiveness of the protective frame under actual dynamic conditions.

(d) Test procedures - general.

1. The tractor used shall be the tractor with the greatest weight on which the protective frame is to be used.
2. A new protective frame and mounting connections of the same design shall be used for each test procedure.

3. Instantaneous and permanent frame deformation shall be measured and recorded for each segment of the test.
4. Dimensions relative to the seat shall be determined with the seat unloaded and adjusted to its highest and most rearward latched position provided for a seated operator.
5. If the seat is offset, the frame loading shall be on the side with the least space between the centerline of the seat and the upright.
6. The low temperature impact strength of the material used in the protective structure shall be verified by suitable material tests or material certifications in accordance with subsection (2)(f)2.d. of this section.

(e) Test procedure for vehicle overturn.

1. Vehicle weight. The weight of the tractor, for purposes of this subsection, includes the protective frame, all fuels, and other components required for normal use of the tractor. Ballast must be added if necessary to achieve a minimum total weight of 130 lbs. (59 kg.) per maximum power takeoff horsepower at rated engine speed. The weight of the front end must be at least thirty-three (33) lb. (15 kg.) per maximum power takeoff horsepower. In case power takeoff horsepower is unavailable, ninety-five (95) percent of net engine flywheel horsepower shall be used.
2. Agricultural tractors shall be tested at the weight set forth in subparagraph 1 of this paragraph.
3. Industrial tractors shall be tested with items of integral or mounted equipment and ballast that are sold as standard equipment or approved by the vehicle manufacturer for use with the vehicle where the protective frame is expected to provide protection for the operator with such equipment installed. The total vehicle weight and front end weight as tested shall not be less than the weights established in subparagraph 1 of this paragraph.
4. The test shall be conducted on a dry, firm soil bank as illustrated in Figure W-15. The soil in the impact area shall have an average cone index in the 0-6 inch (153 mm.) layer not less than 150 according to American Society of Agricultural Engineers Recommendation ASAE R313, Soil Cone Penetrometer (available in the Central Office of the Kentucky Occupational Safety and Health Program). The path of travel of the vehicle shall be  $12^{\circ} \pm 2^{\circ}$  to the top edge of the bank.
5. The upper edge of the bank shall be equipped with an eighteen (18) inch (457 mm.) high ramp as described in Figure W-15 to assist in tipping the vehicle.
6. The front and rear wheel tread settings, where adjustable, shall be at the position nearest to halfway between the minimum and maximum settings obtainable on the vehicle. Where only two (2) settings are obtainable, the minimum setting shall be used.

7. Vehicle overturn test - sideways and rearward.

a. The tractor shall be driven under its own power along the specified path of travel at a minimum speed of ten (10) m.p.h. (16 km./hr.) or maximum vehicle speed if under ten (10) m.p.h. (16 km./hr.) up the ramp as described in subparagraph 5 of this paragraph to induce sideways overturn.

b. Rear upset shall be induced by engine power with the tractor operating in gear to obtain 3-5 m.p.h. (4.8-8 km./hr.) at maximum governed engine r.p.m. preferably by driving forward directly up a minimum slope of two (2) vertical to one (1) horizontal. The engine clutch may be used to aid in inducing the upset.

(f) Other test procedures. When the field upset test is not used to determine ROPS performance, either the static test or the dynamic test, contained in paragraph (g) or (h) of this subsection, shall be made.

(g) Static test.

1. Test conditions.

a. The laboratory mounting base shall include that part of the tractor chassis to which the protective frame is attached including the mounting parts.

b. The protective frame shall be instrumented with the necessary equipment to obtain the required load deflection data at the location and directions specified in Figures W-16, W-17, and W-18.

c. The protective frame and mounting connections shall be instrumented with the necessary recording equipment to obtain the required load-deflection data to be used in calculating FSB (see paragraph (j)3. of this subsection). The gauges shall be placed on mounting connections before the installation load is applied.

2. Test procedure.

a. The side load application shall be at the upper extremity of the frame upright at a ninety (90) degree angle to the centerline of the vehicle. This side load "L" shall be applied according to Figure W-16. "L" and "D" shall be recorded simultaneously. The test shall be stopped when:

(i) The strain energy absorbed by the frame is equal to the required input energy ( $E_{is}$ ); or

(ii) Deflection of the frame exceeds the allowable deflection; or

(iii) The frame load limit occurs before the allowable deflection is reached in the side load.

b. The L-D diagram, as shown by means of a typical example in Figure W-19, shall be constructed, using the data obtained in accordance with clause a of this subparagraph.

c. The modified  $L_m$ - $D_m$  diagram shall be constructed according to clause (ii) of this subparagraph and according to figure W-20. The strain energy absorbed by the frame ( $E_u$ ) shall then be determined.

d.  $E_{is}$ , FER, and FSB shall be calculated.

e. The test procedure shall be repeated on the same frame utilizing L (rear input; see Figure W-18) and  $E_{ir}$ . Rear load application shall be uniformly distributed along a maximum projected dimension of twenty-seven (27) inches (686 mm.) and a maximum area of 160 square inches (1,032 sq. cm.) normal to the direction of load application. The load shall be applied to the upper extremity of the frame at the point which is midway between the centerline of the seat and the inside of the frame upright.

(h) Dynamic test.

1. Test conditions.

a. The protective frame and tractor shall meet the requirements of paragraph (e)2. or 3. of this subsection, as appropriate.

b. The dynamic loading shall be produced by use of a 4,410 lb. (2,000 kg.) weight acting as a pendulum. The impact face of the weight shall be twenty-seven (27) plus, or minus one (1) inch by twenty-seven (27) plus or minus one (1) inch (686 + or - 25 mm.) and shall be constructed so that its center of gravity is within one (1) inch (25.4 mm.) of its geometric center. The weight shall be suspended from a pivot point 18-22 feet (5.5-6.7 m.) above the point of impact on the frame and shall be conveniently and safely adjustable for height. (See Figure W-21).

c. For each phase of testing, the tractor shall be restrained from moving when the dynamic load is applied. The restraining members shall be of 0.5-0.63 inch (12.5-16 mm.) steel cable and points of attaching restraining members shall be located an appropriate distance behind the rear axle and in front of the front axle to provide a 15°-30° angle between a restraining cable and the horizontal. The restraining member shall either be in the plane in which the center gravity of the pendulum will swing or more than one (1) restraining cable shall give a resultant force in this plane. (See Figure W-22).

d. The wheel tread setting shall comply with the requirements of paragraph (e)6 of this subsection. The tires shall have no liquid ballast and shall be inflated to the maximum operating pressure recommended by the tire manufacturer. With specified tire inflation, the restraining cables shall be tightened to provide tire deflection of 6-8 percent of nominal tire section width. After the vehicle is properly restrained, a wooden beam 6 x 6 in. (15 x 15 cm.) shall be driven tightly against the appropriate wheels and clamped. For the test to the side, an additional wooden beam shall be placed as a prop against the wheel nearest the operator's station and shall be secured to the floor so that it is held tightly against the wheel rim during impact. The length of this beam shall be chosen so that when it is positioned against the wheel rim, it is at an angle of 25°-40° to the horizontal. It shall have a length 20-25 times its depth and a width two (2) to three (3) times its depth. (See Figures W-22 and W-23.)

e. Means shall be provided indicating the maximum instantaneous deflection along the line of impact. A simple friction device is illustrated in Figure W-23.

f. No repair or adjustments may be carried out during the test.

g. If any cables, props, or blocking shift or break during the test, the test shall be repeated.

## 2. Test procedure.

a. General. The frame shall be evaluated by imposing dynamic loading to rear followed by a load to the side on the same frame. The pendulum dropped from the height (see definition "H" in paragraph (j)3. of this subsection) imposes the dynamic load. The position of the pendulum shall be so selected that the initial point of impact on the frame shall be in line with the arc of travel of the center of gravity of the pendulum. A quick release mechanism should be used but, if used, shall not influence the attitude of the block.

b. Impact at rear. The tractor shall be properly restrained according to subparagraphs 1.c. and d. of this paragraph. The tractor shall be positioned with respect to the pivot point of the pendulum such that the pendulum is twenty (20) degrees from the vertical prior to impact, as shown in Figure W-22. The impact shall be applied to the upper extremity of the frame at the point which is midway between the centerline of the seat and the inside of the frame upright of a new frame.

c. Impact at side. The block and restraining shall conform to subparagraphs 1.c. and d. of this paragraph. The point of impact shall be that structural member of the protective frame likely to hit the ground first in a sideways accidental upset. The side impact shall be applied to the side opposite that used for rear impact.

## (i) Performance requirements.

### 1. General.

a. The frame, overhead weather shield, fenders, or other parts in the operator area may be deformed but shall not shatter or leave sharp edges exposed to the operator, or violate dimensions as shown in Figures W-16 and W-17 as follows:

D= 2 in. (51 mm.) inside of frame upright to vertical centerline of seat.

E= 30 in. (762 mm.).

F= Not less than 0 in. and not more than 12 in. (305 mm.), measured at centerline front of seat backrest to crossbar along the line of load application as shown in Figure W-17.

G= 24 in. (610 mm.).

b. The material and design combination used in the protective structure must be such that the structure can meet all prescribed performance tests at zero degrees Fahrenheit in accordance with subsection (2)(f)2.d.

2. Vehicle overturn performance requirements. The requirements of this paragraph must be met in both side and rear overturns.

3. Static test performance requirements. Design factors shall be incorporated in each design to withstand an overturn test as prescribed in this paragraph. The structural requirements will be generally met if FER is greater than one (1) and FSB is greater than K-1 in both side and rear loadings.

4. Dynamic test performance requirements. Design factors shall be incorporated in each design to withstand the overturn test prescribed in this paragraph. The structural requirements will be generally met if the dimensions in this paragraph are adhered to in both side and rear loads.

(j) Definitions applicable to this section.

1. SAE J1194, Society of Automotive Engineers Handbook, 1986, Operator Protection for Wheel-type Agricultural and Industrial Tractors (1983) defines "agricultural tractor" as a "wheel-type vehicle of more than 20 engine horsepower designed to furnish the power to pull, carry, propel, or drive implements that are designed for agricultural usage." Since this subsection applies only to general industry work, the following definition of "agricultural tractor" is adopted for purposes of this regulation: "agricultural tractor" means a wheel-type vehicle of more than twenty (20) engine horsepower, used in general industry work, which is designed to furnish the power to pull, propel, or drive implements.

2. "**Industrial tractor**" means that class of wheeled-type tractor of more than twenty (20) engine horsepower (other than rubber-tired loaders and dozers described in subsection (2) of this section) used in operations such as landscaping, loading, digging, grounds keeping, and highway maintenance.

3. The following symbols, terms, and explanations apply to this section:

$E_{is}$  = Energy input to be absorbed during side loading.

$E'_{is} = 723 + 0.4 W$  ft.-lb. ( $E'_{is} = 100 + 0.12W'$ , m.-kg.).

$E_{ir}$  = Energy input to be absorbed during rear loading.

$E_{ir} = 0.47 W$  ft.-lb. ( $E'_{ir} = 0.14 W'$ , m.-kg.).

$W$  = Tractor weight as prescribed in subsection (3)(e)1. and (e)3., in lb. ( $W'$ , kg.).  $L$  = Static load, lb. (kg.).

$D$  = Deflection under  $L$ , in. (mm.).

$L$ - $D$  = Static load-deflection diagram.

$L_m D_m$  = Modified static load-deflection diagram (Figure W-20). To account for increase in strength due to increase in strain rate, raise  $L$  in plastic range to  $L \times K$ .

$K$  = Increase in yield strength induced by higher rate of loading (1.3 for hot rolled low carbon steel 1010-1030). Low carbon is preferable; however, if higher carbon or other material is used,  $K$  must be determined in the laboratory. Refer to Charles H. Norris, et al., Structural Design for Dynamic Loads (1959), p. 3.

$L_{max}$  = Maximum observed static load.

Load Limit = Point on  $L$ - $D$  curve where observed static load is  $0.8 L_{max}$  (refer to Figure W-19).

$E_u$  = Strain energy absorbed by the frame, ft.-lb. (m.-kg.) area under  $L_m D_m$  curve.

FER = Factor of energy ratio,  $FER = E_u/E_{is}$  also =  $E_u/E_{ir}$

$P_b$  = Maximum observed force in mounting connection under static load,  $L$ , lb. (kg.).

FSB = Design margin for mounting connection  $FSB = (P_u/P_b)-1$ .

$H$  = Vertical height of lift of 4.410 lb. (2,000 kg.) weight, in. ( $H'$ , mm.). The weight shall be pulled back so that the height of its center of gravity above the point of impact is defined as follows:  $H = 4.92 + 0.00190 W$  or ( $H' = 125 + 0.107 W'$ ) (Figure W-24).

(k) Source of standard. The standard in this section is derived from, and restates, Society of Automotive Engineers Standard J1194, Society of Automotive Engineers Handbook, 1986, Protective Frame Test Procedures and Performance Requirements. This standard shall be resorted to in the event that questions of interpretation arise. The standard appears in the 1986 SAE Handbook, which may be examined in the Central Office of the Kentucky Occupational Safety and Health Program.

#### (4) Overhead Protection for Operators of Agricultural and Industrial Tractors.

##### (a) General.



1. Purpose. When overhead protection is provided on wheel-type agricultural and industrial tractors, the overhead protection shall be designed and installed according to the requirements contained in this subsection. The provisions of subsection (2) of this section for rubber-tired dozers and rubber-tired loaders may be used in lieu of the standards contained in this subsection. The purpose of the standard is to minimize the possibility of operator injury resulting from overhead hazards such as flying and falling objects, and at the same time to minimize the possibility of operator injury from the cover itself in the event of accidental upset.

2. Applicability. This standard applies to wheel-type agricultural tractors used in general industry work and to wheel-type industrial tractors used in general industry work.

(b) Overhead protection. When overhead protection is installed on wheel-type agricultural or industrial tractors used in general industry work, it shall meet the requirements of this paragraph. The overhead protection may be constructed of a solid material. If grid or mesh is used, the largest permissible opening shall be such that the maximum circle which can be inscribed between the elements of the grid or mesh is 1.5 in. (38 mm.) in diameter. The overhead protection shall not be installed in such a way as to become a hazard in the case of upset.

(c) Test procedures - general.

1. The requirements of subsection (3)(d), (e), and (f) of this section shall be met.

2. Static and dynamic rear load application shall be uniformly distributed along a maximum projected dimension of 27 in. (686 mm.) and a maximum area of 160 inch<sup>2</sup> (1,032 cm.<sup>2</sup>) normal to the direction of load application. The load shall be applied to the upper extremity of the frame at the point which is midway between the centerline of the seat and the inside of the frame upright.

3. The static and dynamic side load application shall be uniformly distributed along a maximum projected dimension of 27 in. (686 mm.) and a maximum area of 160 inch<sup>2</sup> (1,032 cm.<sup>2</sup>) normal to the direction of load application. The direction of load application is the same as in subsection (3)(g) and (h) of this section. To simulate the characteristics of the structure during an upset, the center of load application may be located from a point 24 in. (610 mm.) (K) forward to 12 in. (305 mm.) (L) rearward of the front of the seat backrest to best utilize the structural strength. See Figure W-25.

(d) Drop test procedures.

1. The same frame shall be subjected to the drop test following either the static or dynamic test.

2. A solid steel sphere or material of equivalent spherical dimension weighing 100 lb. (45.4 kg.) shall be dropped once from a height 10 ft. (3,048 mm.) above the overhead cover.

3. The point of impact shall be on the overhead cover at a point within the zone of protection as shown in Figure W-26, which is furthest removed from major structural members.

(e) Crush test procedures.

1. The same frame shall be subjected to the crush test following the drop test and static or dynamic test.
2. The test load shall be applied as shown in Figure W-27 with the seat positioned as specified in subsection (3)(d)4. of this section. Loading cylinders shall be pivotally mounted at both ends. Loads applied by each cylinder shall be equal within two (2) percent, and the sum of the loads of the two (2) cylinders shall be two (2) times the tractor weight as set forth in subsection (3)(e)1. of this section. The maximum width of the beam illustrated in Figure W-27 shall be 6 in. (152 mm.).

(f) Performance requirements.

1. General. The performance requirements set forth in subsection (3)(i)2., 3., and 4. of this section shall be met.
2. Drop test performance requirements.
  - a. Instantaneous deformation due to impact of the sphere shall not enter the protected zone as illustrated in Figure W-25, W-26, and W-28.
  - b. In addition to the dimensions set forth in subsection (3)(i)1.a. of this section, the following dimensions apply to Figure W-28:  
  
H = 17.5 in. (444 mm.).  
  
J = 2 in. (50.8 mm.) measured from the outer periphery of the steering wheel.
3. Crush test performance requirements. The protected zone as described in Figure W-28 must not be violated.

(g) Source of standard. This standard is derived from, and restates, the portions of Society of Automotive Engineers Standard J167, Society of Automotive Engineers Handbook, 1986, which pertain to overhead protection requirements. The full title of the SAE standard is: Protective Frame with Overhead Protection-test Procedures and Performance Requirements. The SAE standard shall be resorted to in the event that questions of interpretation arise. The SAE standard appears in the 1986 SAE Handbook, which may be examined in the Central Office of the Kentucky Occupational Safety and Health Program.

## **Section 6. Fire Apparatus and Fire Department Facilities.**

- (1) Scope. This section shall apply to industrial fire departments and private, public or contractual type fire departments. This section shall not apply to volunteer fire departments.
- (2) Persons riding on fire apparatus. Beginning September 1, 1991, a person riding on fire apparatus shall be secured to the vehicle by seat belts or safety harnesses when the vehicle is in motion.
- (3) Inspection, maintenance, and repair of vehicles. Beginning January 1, 1992:

(a) All fire department vehicles shall be inspected at least weekly and within twenty-four (24) hours after any use or repair to identify and correct unsafe conditions.

(b) A fire department vehicle found to be unsafe shall be placed out of service until repaired. After being repaired, the vehicle shall be inspected prior to being placed back in service.

(c) The inspection shall include:

1. Tires, brakes, warning lights and devices, headlights and clearance lights, windshield wipers and mirrors;
2. Starting the apparatus, and verification of the operation of pumps and other equipment; and
3. Inspection of the safety equipment carried on fire department vehicles.

(d) A fire department shall maintain inspection, maintenance, repair, and service records for all vehicles and equipment used for emergency operations.

(4) Facility safety. Beginning July 1, 1993:

(a) Sleeping areas in fire stations shall:

1. Be separated from vehicle storage areas by at least one (1) hour fire resistive assemblies; or
2. Have operable fire suppression or operable smoke detection systems.

(b) A fire station shall have a system capable of ventilating.

(5) Effective dates.

(a) Subsection (2) of this section shall become effective September 1, 1991.

(b) Subsection (3) of this section shall become effective January 1, 1992.

(c) Subsection (4) of this section shall become effective July 1, 1993.

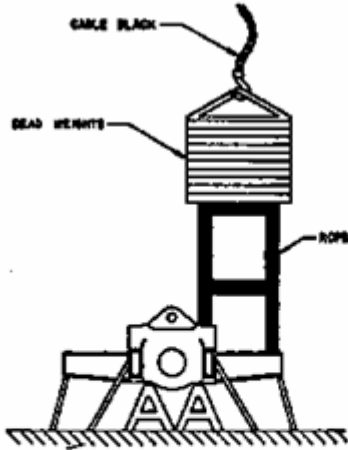


Figure W-1—Vertical loading setup for all types of equipment described in Subsection (2)(a).

Incremental loading shall be continued until the ROPS has absorbed the amount of energy and the minimum applied load specified under paragraph (f) of this Subsection has been reached or surpassed.

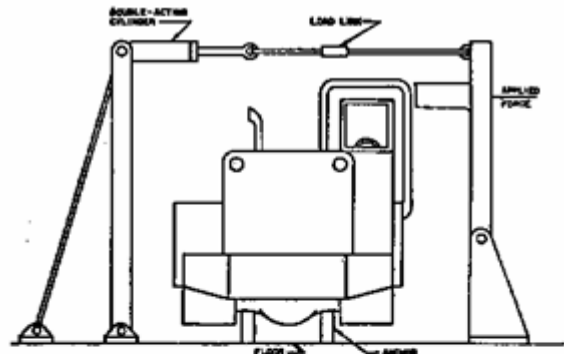


Figure W-3—Test setup for rubber-tired self-propelled scrapers.

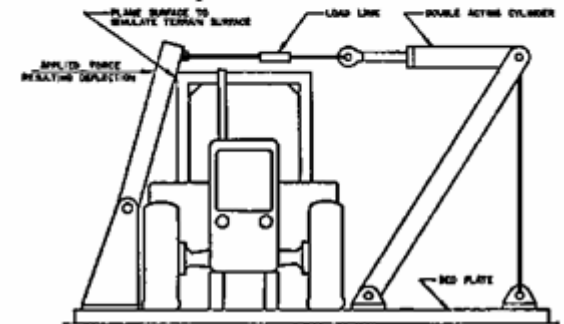


Figure W-6—Test setup for rubber-tired front-end loaders, rubber-tired dozers, and motor graders.

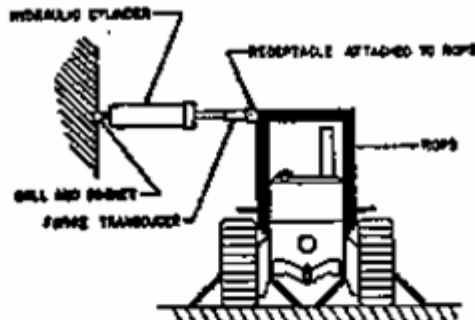


Figure W-4—Side-loading setup for crawler tractors and crawler loaders.

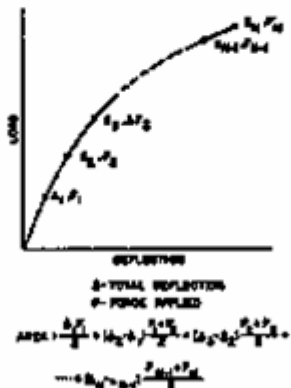


FIGURE W-5—Determination of energy area under force deflection curve for all types of ROPS equipment defined in Subsection (2).

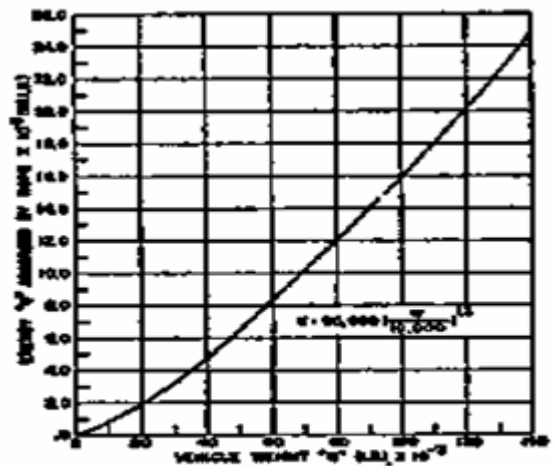


Figure W-5—Energy absorbed versus vehicle weight.

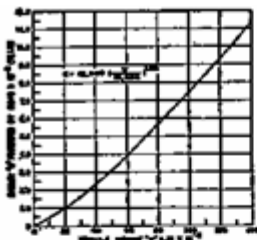


Figure W-1—Static absorbed versus vehicle weight.

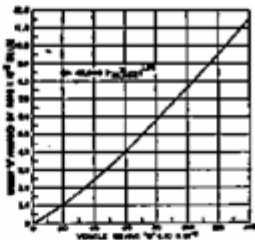


Figure W-2—Static absorbed versus vehicle weight.

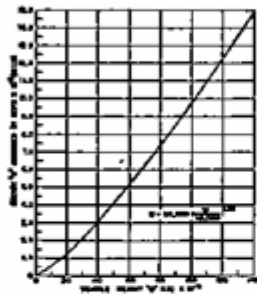


Figure W-3—Static absorbed versus vehicle weight.

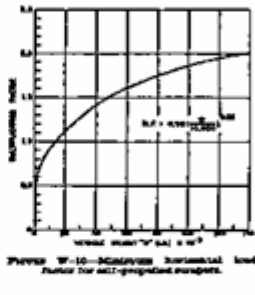


Figure W-4—Static absorbed versus vehicle weight.

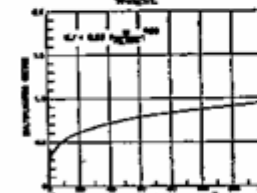


Figure W-5—Static absorbed versus vehicle weight.

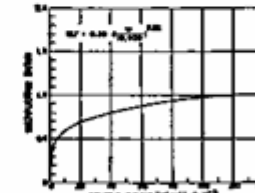


Figure W-6—Static absorbed versus vehicle weight.

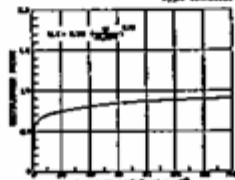


Figure W-7—Static absorbed versus vehicle weight.

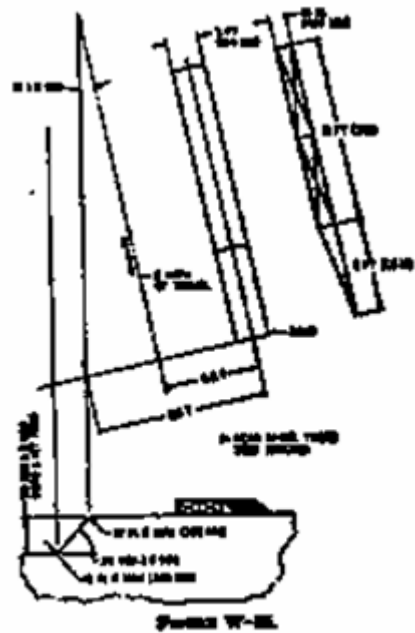


Figure W-8.

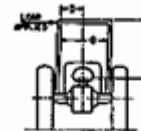


Figure W-9—Side load application.

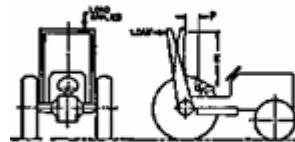


Figure W-10—Rear load application.

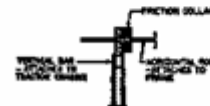


Figure W-11—Method of measuring lateral vehicle deflection.

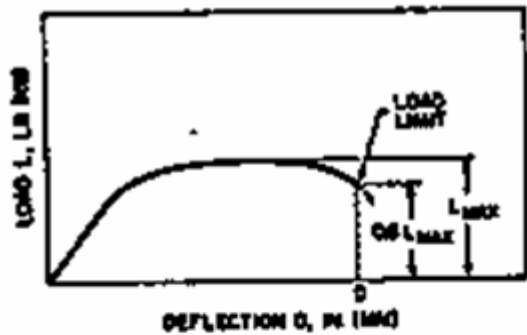


FIGURE W-19—Typical L-D diagram.

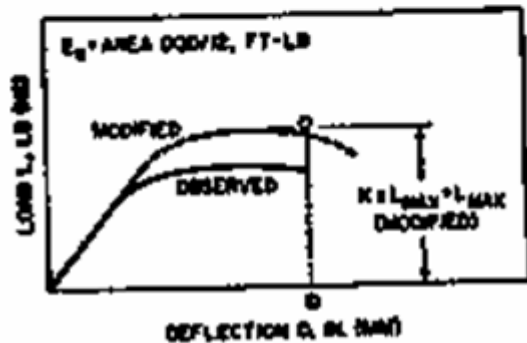


FIGURE W-20—Typical modified L-D diagram.

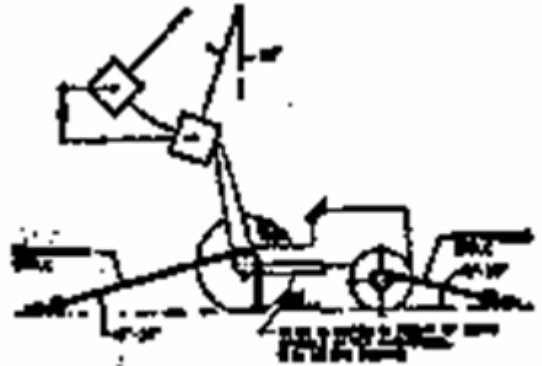


FIGURE W-22—Method of impact from rear.

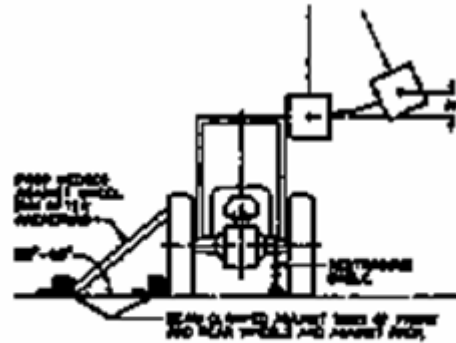


FIGURE W-23—Method of impact from side.

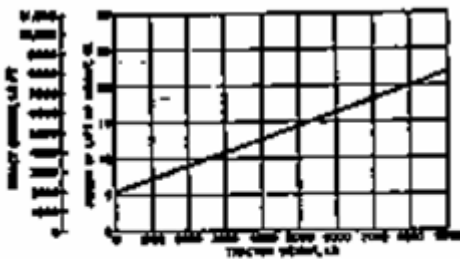


FIGURE W-24—Impact energy and corresponding lift height of 6,610 lb. (3,000 kg.) weight.

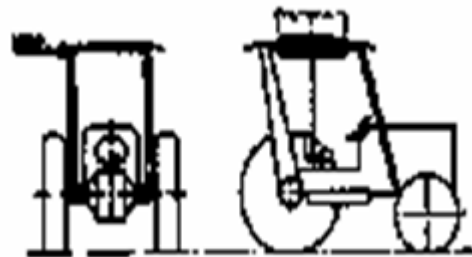


FIGURE W-25—Location for side load.

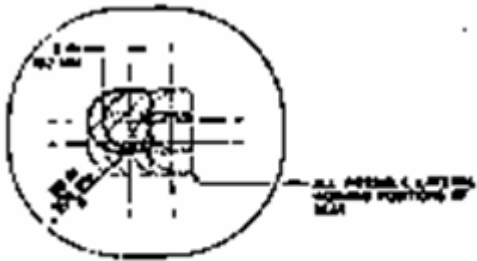


FIGURE W-26—Location of protection for drop test.

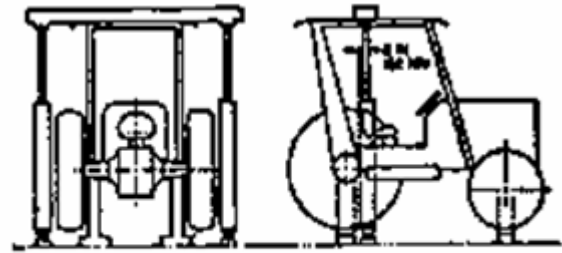


FIGURE W-27—Method of load application for crush test.

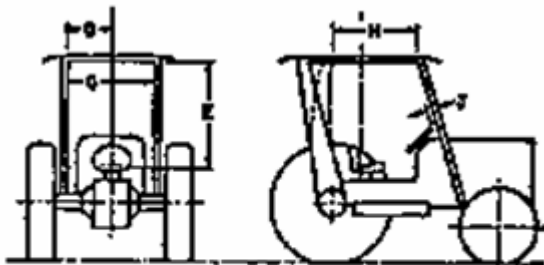


FIGURE W-28—Protected zone during crush and drop tests.

**803 KAR 2:300  
GENERAL**

**29 CFR 1910.1  
PURPOSE AND SCOPE**

**29 CFR 1910.1**

Amended by **803 KAR 2:300 Section 2** so that it reads:

The provisions of this regulation adopt and extend the applicability of established federal standards contained in 29 CFR 1910 to all employers, employees, and places of employment throughout the Commonwealth except those excluded in KRS 338.021.

**29 CFR 1910.2  
DEFINITIONS**

**29 CFR 1910.2**

Amended by **803 KAR 2:300 Section 1** so that it reads:

As used in this part, unless the context clearly requires otherwise:

- (1) **“Act”** means KRS Chapter 338.
- (2) **“Assistant Secretary of Labor”** means Commissioner of Labor, Kentucky Department of Labor, or Executive Director, Office of Occupational Safety and Health, Kentucky Department of Labor.
- (3) **“C.F.R.”** means Code of Federal Regulations.
- (4) **“Employee”** is defined in KRS 338.015(2).
- (5) **“Employer”** is defined in KRS 338.015(1).
- (6) **“Established federal standard”** is defined in KRS 338.015(10).
- (7) **“National consensus standard”** is defined in KRS 338.015(9).
- (8) **“Secretary of Labor”** means Commissioner of Labor, Kentucky Department of Labor or Executive Director, Office of Occupational Safety and Health, Kentucky Department of Labor.
- (9) **“Standard”** is defined in KRS 338.015(3).
- (10) **“U.S. Department of Labor”** means U.S. Department of Labor or Kentucky Department of Labor, U.S. 127 South, Frankfort, Kentucky 40601.



**803 KAR 2:303**  
**WALKING-WORKING SURFACES**

**29 CFR 1910.23**  
**GUARDING FLOOR & WALL OPENINGS & HOLES**

**29 CFR 1910.23(a)(7)**

Amended by **803 KAR 2:303 Section 2(2)** so that it reads:

Every temporary or permanent floor opening shall have standard railings, or shall be constantly attended by someone.

**803 KAR 2:306**  
**OCCUPATIONAL HEALTH & ENVIRONMENTAL CONTROLS**

**29 CFR 1910.95**  
**OCCUPATIONAL NOISE EXPOSURE**

**29 CFR 1910.95(h)(1)**

Amended by **803 KAR 2:306 Section 2(2)(b)** so that it reads:

Audiometric tests shall be pure tone, air conduction, hearing threshold examinations with test frequencies including as a minimum 500, 1,000, 2,000, 3,000, 4,000, and 6,000 Hz. Testing at 8,000 Hz shall be included in the audiometric tests for employers using audiometers with that capacity and all audiometric tests shall include 8,000 Hz.

**29 CFR 1910.95(h)(4)**

Amended by **803 KAR 2:306 Section 2(3)(b)** so that it reads:

Audiometric examinations shall be administered in a room meeting the requirements listed in Appendix D: Audiometric Test Rooms. If an audiometric test room is located in a mobile test van, background sound pressure level measurements shall be taken at each testing location.

**29 CFR 1910.95(h)(5)(ii)**

Amended by **803 KAR 2:306 Section 2(4)(b)** so that it reads:

Audiometer calibration shall be checked acoustically at least annually in accordance with Appendix E: Acoustic Calibration of Audiometers. Test frequencies below 500 Hz and above 8,000 Hz may be omitted from this check. Deviations of fifteen (15) decibels or greater shall require an exhaustive calibration.

**29 CFR 1910.95(h)(5)(iii)**

Amended by **803 KAR 2:306 Section 2(5)(b)** so that it reads:

An exhaustive calibration shall be performed at least every two (2) years in accordance with sections 4.1.2; 4.1.3; 4.1.4.3; 4.2; 4.4.1; 4.4.2; 4.4.3; and 4.5 of the American National Standard Specification for Audiometers, S3.6-1969. Test frequencies below 500 Hz and above 8,000 Hz may be omitted from this calibration.

**29 CFR 1910.95(l)(1)**

Amended by **803 KAR 2:306 Section 2(6)(b)** so that it reads:

The employer shall make available to affected employees or their representatives copies of this standard and shall also post a notice of the availability of this standard in the workplace.

**29 CFR 1910.95(o)**

Amended by **803 KAR 2:306 Section 2(7)(b)** so that it reads:

Paragraphs (c) through (n) of this section shall not apply to employers engaged in oil and gas well drilling and servicing operations, agriculture, or construction.

**29 CFR 1910.95 Appendix E**

Amended by **803 KAR 2:306 Section 2(8)(b)** so that it reads:

Acoustic Calibration of Audiometers.

1. This Appendix is Mandatory.
2. Audiometer calibration shall be checked acoustically, at least annually, according to the procedures described in this Appendix. The equipment necessary to perform these measurements shall be a sound level meter, octave-band filter set, and a National Bureau of Standards 9A coupler. In making these measurements, the accuracy of the calibrating equipment shall be sufficient to determine that the audiometer is within the tolerances permitted by American Standard Specification for Audiometers, S3.6-1969.
3. Sound pressure output check.
  - a. Place the earphone coupler over the microphone of the sound level meter and place the earphone on the coupler.
  - b. Set the audiometer's hearing threshold level (HTL) dial to seventy (70) dB.
  - c. Measure the sound pressure level of the tones at each test frequency from 500 Hz through 8,000 Hz for each earphone.
  - d. At each frequency the readout on the sound level meter should correspond to the levels in Table E-1 or Table E-2, as appropriate, for the type of earphone, in the column entitled "sound level meter reading".
4. Linearity check.
  - a. With the earphone in place, set the frequency to 1,000 Hz and the HTL dial on the audiometer to seventy (70) dB.
  - b. Measure the sound levels in the coupler at each ten (10) dB decrement from seventy (70) dB to ten (10) dB, noting the sound level meter reading at each setting.
  - c. For each ten (10) dB decrement on the audiometer the sound level meter should indicate a corresponding ten (10) dB decrease.
  - d. This measurement may be made electrically with a voltmeter connected to the earphone terminals.

5. Tolerances. If any of the measured sound levels deviate from the levels in Table E-1 or Table E-2 plus or minus three (3) dB at any test frequency between 500 and 3,000 Hz, four (4) dB at 4,000 Hz, or five (5) dB at 6,000 Hz and 8,000 Hz, an exhaustive calibration shall be advised. An exhaustive calibration shall required if the deviations are greater than ten (10) dB at any test frequency.

<b>TABLE E-1</b> REFERENCE THRESHOLD LEVELS FOR TELEPHONICS-TDH-39 EARPHONES		
Frequency, Hz	Reference threshold level for DH- 39 earphones, dB	Sound level meter level meter reading, dB
500	11.5	81.5
1000	7.07	7.0
2000	9.07	9.0
3000	10.0	80.0
4000	9.57	9.5
6000	15.5	85.5
8000	13.0	83.0

<b>TABLE E-2</b> REFERENCE THRESHOLD LEVELS FOR TELEPHONICS-TDH-49 EARPHONES		
Frequency , Hz	Reference threshold level for TDH- 49 earphones, dB	Sound level meter level meter reading, dB
500	13.5	83.5
1000	7.5	77.5
2000	11.0	81.0
3000	9.5	79.5
4000	10.5	80.5
6000	13.5	83.5
8000	13.0	83.0

**803 KAR 2:307  
HAZARDOUS MATERIALS**

**29 CFR 1910.106  
FLAMMABLE AND COMBUSTIBLE LIQUIDS**

**29 CFR 1910.106(a)(3)**

Amended by **803 KAR 2:307 Section 2(2)** so that it reads:

The term automotive service station, or service stations, shall mean that portion of property where flammable or combustible liquids used as motor fuel are stored and dispensed from fixed equipment and into the fuel tanks of motor vehicles and shall include any facilities available for the sale and servicing of tires, batteries, accessories and for minor automotive maintenance work and shall also include private stations not accessible or open to the public such as those used by commercial, industrial or governmental establishments. This section shall not apply to agriculture.

**803 KAR 2:309**  
**GENERAL ENVIRONMENTAL CONTROLS**

**29 CFR 1910.141**  
**SANITATION**

**29 CFR 1910.141(c)(2)(i)**

Amended by **803 KAR 2:309 Section 2(2)** so that it reads:

29 CFR 1910.141(c)(2)(i) is amended to read: Each water closet shall occupy a separate compartment with walls or partitions between fixtures sufficiently high to assure privacy.

**29 CFR 1910.147**  
**THE CONTROL OF HAZARDOUS ENERGY**  
**(LOCKOUT)**

**29 CFR 1910.147(c)(2)(ii)**

Amended by **803 KAR 2:309 Section 3(2)** to read:

If an energy isolating device is capable of being locked out, the employer's energy control program under paragraph (c)(1) of this subsection shall utilize lockout.

**29 CFR 1910.147(c)(3)(i)**

Amended by **803 KAR 2:309 Section 3(4)** to read:

**Full employee protection.** When a tagout device is used on an energy isolating device which is incapable of being locked out, the tagout device shall be attached at the same location that the lockout device would have been attached, and the employer shall demonstrate that the tagout program will provide a level of safety equivalent to that obtained by using a lockout program. If tagout devices are used with energy isolating devices designed with the incapability of being locked, the tag attachment will be fastened at the same point at which the lock would have been attached.

## **803 KAR 2:310**

### **MEDICAL SERVICES & FIRST-AID**

**Section 1.** The employer shall ensure the ready availability of medical personnel for advice and consultation on matters of occupational health.

(1) Employers with eight (8) or more employees within the establishment shall have persons adequately trained to render first aid and adequate first aid supplies shall be readily available. Outside salesmen, truck drivers, seasonal labor, and others who, while performing their duties, are away from the premises more than fifty (50) percent of the time shall not be included in determining the number of employees.

(2) All other employers shall, in the absence of an infirmary, clinic, or hospital in near proximity to the workplace which is used for the treatment of all injured employees, have a person or persons adequately trained to render first aid. Adequate first aid supplies shall be readily available.

**Section 2.** If the eyes or body of any person may be exposed to injurious corrosive material, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use. The facilities shall comply with the provisions of the American National Standards Institute (ANSI) Z-358.1-1990, "Standard for Emergency Eyewash and Shower Equipment", which is incorporated by reference, with the following exceptions:

(1) In a remote area if a person is visibly or audibly separated from coworkers, an audible or visible alarm shall activate to alert appropriate personnel when the unit is in use; or in the alternative, a two (2) way communication device shall be used. The alarm shall continue until the unit is no longer in use.

(2) A facility shall be tested according to the standard monthly.

**Section 3.** Incorporation by reference.

(1) ANSI Z-358.1-1990, "Standards for Emergency Eyewash and Shower Equipment", 1990, is incorporated by reference.

(2) This material may be inspected, copied, or obtained, subject to applicable copyright law, at the Kentucky Department of Labor, Office of Occupational Safety and Health, 1047 U.S. 127 South, Frankfort, Kentucky 40601, Monday through Friday 8 a.m. to 4:30 p.m.

**803 KAR 2:313**  
**MATERIALS HANDLING and STORAGE**

**29 CFR 1910.178(m)(12)**  
**POWERED INDUSTRIAL TRUCKS**  
Adopted by **803 KAR 2:313**

Federal OSHA deleted and no longer enforces 1910.178(m)(12) through (m)(12)(iii). The Kentucky Occupational Safety and Health Program retains and continues to enforce 1910.178(m)(12) through (m)(12)(iii), as adopted by 803 KAR 2:313. The standard states:

1910.178(m)(12) Whenever a truck is equipped with vertical only, or vertical and horizontal controls elevatable with the lifting carriage or forks for lifting personnel, the following additional precautions shall be taken for the protection of personnel being elevated.

- (i) Use of a safety platform firmly secured to the lifting carriage and/or forks.
- (ii) Means shall be provided whereby personnel on the platform can shut off power to the truck.
- (iii) Such protection from falling objects as indicated necessary by the operating conditions shall be provided.



**803 KAR 2:314**  
**MACHINERY & MACHINE GUARDING**

**29 CFR 1910.217**  
**MECHANICAL POWER PRESSES**

**29 CFR 1910.217(b)(7)(xii)**

Amended by **803 KAR 2:314 Section 2(2)** by adding:

This provision will not prevent the employer from utilizing a reversing means of the drive motor with the clutch-brake control in the "inch" position.

**803 KAR 2:318**  
**ADOPTION OF 29 CFR PART 1910.301-399**

**29 CFR 1910.333**  
**SELECTION AND USE OF WORK PRACTICES**

**29 CFR 1910.333(b)(2)(iii)(C)**

Amended by **803 KAR 2:318 Section 1(2)(b)** so that it reads:

If a lock cannot be applied, tagging procedures shall provide a level of safety equivalent to that obtained by the use of a lock, as outlined in paragraph (b)(2)(iii)(D).

## 803 KAR 2:320

### TOXIC & HAZARDOUS SUBSTANCES

#### Section 1. Definitions.

(1) Definitions for Section 2 of this administrative regulation;

(1) **"Absolute filter"** means a filter capable of retaining 99.97 percent of a mono disperse aerosol of three-tenths (0.3) mu particles.

(2) **"Area Director"** means Executive Director, Office of Occupational Safety and Health, Kentucky Department of Labor.

(3) **"Assistant Secretary of Labor"** means the Commissioner, Kentucky Department of Labor or Executive Director, Office of Occupational Safety and Health.

(4) **"Authorized employee"** means an employee whose duties require him to be in the regulated area and who has been specifically assigned to that area by the employer.

(5) **"Clean change room"** means a room where employees put on clean clothing or protective equipment in an environment free of 4,4'-Methylene bis (2-chloroaniline).

(6) **"Closed system"** means an operation involving 4,4'-Methylene bis (2-chloroaniline) if containment prevents the release of 4,4'-Methylene bis (2-chloroaniline) into regulated areas, nonregulated areas, or the external environment.

(7) **"Decontamination"** means the inactivation of 4,4'-Methylene bis (2-chloroaniline) or its safe disposal.

(8) **"Director"** means the Director, National Institute for Occupational Safety and Health, or any person directed by him or the Secretary of Health, Education and Welfare to act for the Director.

(9) **"Disposal"** means the safe removal of 4,4'-Methylene bis (2-chloroaniline) from the work environment.

(10) **"Emergency"** means an unforeseen circumstance or set of circumstances resulting in the release of 4,4'-Methylene bis (2-chloroaniline) which may result in exposure to or contact with 4,4'-Methylene bis (2-chloroaniline).

(11) **"External environment"** means any environment external to regulated and nonregulated areas.

(12) **"Employee"** is defined in KRS 338.015(2).

(13) **"Employer"** is defined in KRS 338.015(1).

(14) **"Established federal standard"** is defined in KRS 338.015(10).

(15) **"Isolated system"** means a fully enclosed structure, other than the vessel of containment, of 4,4'-Methylene bis (2-chloroaniline), which is impervious to the passage of entry of 4,4'-Methylene bis (2-chloroaniline), and which would prevent the entry of 4,4'-Methylene bis (2-chloroaniline) into regulated areas, or the external environment, if leakage or spillage from the vessel of containment occurs.

(16) **"Laboratory type hood"** means a device enclosed on three sides with the top and bottom designed and maintained to draw air inward at an average linear face velocity of 150 feet per minute with a minimum of 125 feet per minute; and designed, constructed, and maintained so that an operation involving 4,4'-Methylene bis (2-chloroaniline) within the hood does not require the insertion of any portion of any employee's body other than his hands and arms.

(17) **"National consensus standard"** is defined in KRS 338.015(9).

(18) **"Nonregulated area"** means any area under the control of the employer where entry and exit is neither restricted nor controlled.

(19) **"Open-vessel system"** means an operation involving 4,4'-Methylene bis (2-chloroaniline) in an open vessel, which is not in an isolated system, a laboratory type hood, nor in any other system affording equivalent protection against the entry of 4,4'-Methylene bis (2-chloroaniline) into regulated areas, nonregulated areas, or the external environment.

(20) **"Protective clothing"** means clothing designed to protect an employee against contact with or exposure to 4,4'-Methylene bis (2-chloroaniline).

(21) **"Regulated area"** means an area where entry and exit is restricted and controlled.

(22) **"Standard"** is defined in KRS 338.015(3).

## Section 2. 4,4-Methylene bis (2-Chloroaniline)

### (1) Scope and application.

(a) This section shall apply to any area in which 4,4'-Methylene bis (2-chloroaniline), Chemical Abstracts Service Registry Number 101144, is manufactured, processed, repackaged, released, handled, or stored. This section shall not apply to trans-shipment in sealed containers, except for the labeling requirements under paragraphs (4)(b), (c), and (d) of this section.

(b) This section shall not apply to solid or liquid mixtures containing less than 1.0 percent by weight of 4,4'-Methylene bis (2-chloroaniline).

(2) Requirements for areas containing 4,4'-Methylene bis (2-chloroaniline). A regulated area shall be established by an employer where 4,4'-Methylene bis (2-chloroaniline) is manufactured, processed, used, repackaged, released, handled, and stored. Those areas shall be controlled in accordance with the requirements for the following category or categories describing the operations involved:

(a) Isolated systems. Employees working with 4,4'-Methylene bis (2-chloroaniline) within an isolated system such as a "glove box" shall wash their hands and arms upon completion of the assigned task and before engaging in other activities not associated with the isolated system.

(b) Closed system operation. Within regulated areas where 4,4'-Methylene bis (2-chloroaniline) is stored in a sealed container, or contained in a closed system including piping systems, with any sample ports or openings closed while 4,4'-Methylene bis (2-chloroaniline) is contained within:

1. Access shall be restricted to authorized employees only; and
2. Employees shall be required to wash hands, forearms, face, and neck upon each exit from the regulated areas, close to the point of exit and before engaging in other activities.

(c) Open vessel system operations. Open vessel system operations shall be prohibited.

(d) Transfer from a closed system, charging or discharging point operations, or otherwise opening a closed system. In operations involving a "laboratory type hood," or in locations where 4,4'-Methylene bis (2-chloroaniline) is contained in an otherwise "closed system," but is transferred, charged, or discharged into other normally closed containers, the provisions of this paragraph shall apply;

1. Access shall be restricted to authorized employees only.
2. Each operation shall be provided with continuous local exhaust ventilation so that air movement shall always be from ordinary work areas to the operation. Exhaust air shall not be discharged to regulated areas, nonregulated areas or the external environment unless it is decontaminated. Clean makeup air shall be introduced in sufficient volume to maintain the correct operation of the local exhaust system.
3. Employees shall be provided with, and required to wear, clean, full body protective clothing (smocks, coveralls, or long-sleeved shirt and pants), shoe covers, and gloves prior to entering the regulated area.
4. Employees engaged in 4,4'-Methylene bis (2-chloroaniline) handling operations shall be provided with and required to wear and use a half-face, filter-type respirator for dusts, mists, and fumes, in accordance with 29 C.F.R. 1910.134. A respirator affording higher level of protection may be substituted.
5. Prior to each exit from a regulated area, employees shall be required to remove and leave protective clothing and equipment at the point of exit and at the last exit of the day, to place used clothing and equipment in impervious containers at the point of exit for decontamination or disposal. The contents of the impervious containers shall be identified, as required under paragraphs (4)(b), (c), and (d) of this section.
6. Employees shall be required to wash hands, forearms, face, and neck on each exit from the regulated area, close to the point of exit, and before engaging in other activities.
7. Employees shall be required to shower after the last exit of the day.
8. Drinking fountains shall be prohibited in the regulated area.

(e) Maintenance and decontamination activities. In cleanup of leaks or spills, maintenance or

repair operations on contaminated systems or equipment, or any operations involving work in an area where direct contact with 4,4'-Methylene bis (2-chloroaniline) could result, each authorized employee entering that area shall:

1. Be provided with and required to wear clean, impervious garments, including gloves, boots, and continuous-air supplied hood in accordance with 29 C.F.R. 1910.134;
2. Be decontaminated before removing the protective garments and hood; and
3. Be required to shower upon removing the protective garments and hood.

(f) Laboratory activities. The requirements of this paragraph shall apply to research and quality control activities involving the use of 4,4'-Methylene bis (2-chloroaniline).

1. Mechanical pipetting aids shall be used for all pipetting procedures.
2. Experiments, procedures, and equipment which could produce aerosols shall be confined to laboratory-type hoods or glove boxes.
3. Surfaces on which 4,4'-Methylene bis (2-chloroaniline) is handled shall be protected from contamination.
4. Contaminated wastes and animal carcasses shall be collected in impervious containers which are closed and decontaminated prior to removal from the work area. The wastes and carcasses shall be incinerated so that no carcinogenic products are released.
5. All other forms of 4,4'-Methylene bis (2-chloroaniline) shall be inactivated prior to disposal.
6. Employees engaged in animal support activities shall be:
  - a. Provided with, and required to wear, a complete protective clothing change, clean each day, including coveralls or pants and shirt, foot covers, head covers, gloves, and appropriate respiratory protective equipment or devices; and
  - b. Required prior to each exit from a regulated area, to remove and leave protective clothing and equipment at the point of exit and at the last exit of the day, to place used clothing and equipment in impervious containers at the point of exit for decontamination or disposal. The contents of the impervious containers shall be identified as required under paragraphs (5)(b), (c), and (d) of this section;
  - c. Required to wash hands, forearms, face, and neck upon each exit from the regulated area close to the point of exit and before engaging in other activities; and
  - d. Required to shower after the last exit of the day.
7. Employees, except for those engaged in animal support activities, each day shall be:

- a. Provided with and required to wear a clean change of appropriate laboratory clothing, such as a solid front gown, surgical scrub suit, or fully buttoned laboratory coat;
- b. Required prior to each exit from a regulated area, to remove and leave protective clothing and equipment at the point of exit and at the last exit of the day, to place used clothing and equipment in impervious containers at the point of exit for decontamination or disposal. The contents of the impervious containers shall be identified as required under subsection (4)(b), (c), and (d) of this section; and
- c. Required to wash hands, forearms, face and neck upon each exit from the regulated area close to the point of exit and before engaging in other activities.

8. Air pressure in the laboratory areas and animal rooms where 4,4'-Methylene bis (2-chloroaniline) is handled and bioassay studies are performed shall be negative in relation to the pressure in surrounding area. Exhaust air shall not be discharged to regulated areas, nonregulated areas, or the external environment unless it is decontaminated.

9. There shall not be a connection between regulated areas and any other areas through the ventilation system.

10. A current inventory of 4,4'-Methylene bis (2-chloroaniline) shall be maintained.

11. Ventilated apparatus such as laboratory type hoods, shall be tested at least semi-annually or immediately after ventilation modification or maintenance operations, by personnel fully qualified to certify correct containment and operation.

(g) Premixed solutions. Where 4,4'-Methylene bis (2-chloroaniline) is present only in a single solution at a temperature not exceeding 120 degrees Celsius, the establishment of a regulated area shall not be required; except

1. Only authorized employees shall be permitted to handle the materials;
2. Each day employees shall be provided with and required to wear a clean change of protective clothing (smocks, coveralls, or long-sleeved shirts and pants), gloves, and other protective garments and equipment necessary to prevent contact with the solution in the process used;
3. Employees shall be required to remove and leave protective clothing and equipment when leaving the work area at the end of the work day or when solution is spilled on the clothing or equipment. Used clothing and equipment shall be placed in impervious containers for decontamination or disposal. The contents of the impervious containers shall be identified, as required under subsection (4)(b), (c), and (d);
4. Employees shall be required to wash hands and face after removing protective clothing and equipment and before engaging in other activities;
5. Employees assigned to work covered by this paragraph shall be deemed to be working

in regulated areas for the purposes of paragraphs (4)(a), (b), (c) of this section; and

6. Work areas where solution may be spilled shall be:

(a) covered daily or after any spill with a clean covering; and

(b) cleaned thoroughly daily and after any spill.

(3) General regulated area requirements.

(a) Employee identification. A daily roster of employees entering regulated areas shall be established and maintained. The rosters or a summary of the rosters shall be retained for a period of 20 years. The rosters and/or summaries shall be provided upon request to authorized representatives of the Assistant Secretary and the Director. If the employer ceases business without a successor, rosters shall be forwarded by registered mail to the Director.

(b) Emergencies. In an emergency, immediate measures including, but not limited to the requirements of subdivisions 1., 2., 3., 4., and 5. of this subparagraph shall be implemented.

1. The potentially affected area shall be evacuated as soon as the emergency is determined.

2. Hazardous conditions created by the emergency shall be eliminated and the potentially affected area shall be decontaminated prior to the resumption of normal operations.

3. Special medical surveillance by a physician shall be instituted within 24 hours for employees present in the potentially affected area at the time of the emergency. A report of the medical surveillance and any treatment shall be included in the incident report, in accordance with paragraph (6)(b) of this section.

4. If an employee has a known contact with 4,4'-Methylene bis (2-chloroaniline) the employee shall be required to shower as soon as possible, unless contraindicated by physical injuries.

5. An incident report on the emergency shall be reported as provided in paragraph (5)(b) of this section.

(c) Hygiene facilities and practices.

1. Storage or consumption of food, storage or use of containers of beverages, storage or consumption of beverages, storage or application of cosmetics, smoking, storage of smoking materials, tobacco products or other products for chewing, or the chewing of those products, shall be prohibited in regulated areas.

2. If employees are required by this section to wash, washing facilities shall be provided in accordance with 29 C.F.R. 1910.141.

3. Where employees are required by this section to shower, facilities shall be provided in accordance with 29 C.F.R. 1910.141(d)(3).



4. If employees wear protective clothing and equipment, clean change rooms shall be provided, in accordance with 29 C.F.R. 1910.141(e), for the number of employees required to change clothes.

5. Where toilets are in regulated areas, such toilets shall be in a separate room.

(d) Contamination control.

1. Regulated areas, except for outdoor systems, shall be maintained under pressure negative with respect to nonregulated areas. Local exhaust ventilation may be used to satisfy this requirement. Clean makeup air in equal volume shall replace air removed.

2. Any equipment, material, or other item taken or removed from a regulated area shall be done so in a manner that does not cause contamination in nonregulated areas or the external environment.

3. Decontamination procedures shall be established and implemented to remove 4,4'-Methylene bis (2-chloroaniline) from the surface of materials, equipment and the decontamination facility.

4. Dry sweeping and dry mopping shall be prohibited.

(4) Signs, information and training.

(a) Signs

1. Entrance to regulated areas shall be posted with signs bearing the legend:

**CANCER-SUSPECT AGENT  
Authorized Personnel Only**

2. Entrances to regulated areas containing operations covered in paragraph (2)(e) of this section shall be posted with signs bearing the legend:

**Cancer-Suspect Agent Exposed  
In this Area  
Impervious Suit Including Gloves,  
Boots, and Air-Supplied Hood  
Required At All Times  
Authorized Personnel Only**

3. Appropriate signs and instructions shall be posted at the entrance to, and exit from, regulated areas, informing employees of the procedures that shall be followed in entering and leaving a regulated area.

(b) Container contents identification.

1. Containers of 4,4'-Methylene bis (2-chloroaniline) and containers required under subsections (2)(d)5, (2)(f)7.b., and (2)(g)3 of this section which are accessible only to, and handled only by authorized employees, or by other employees trained in accordance with subparagraph (e) of this paragraph, may have contents identification limited to a generic or proprietary name, or other proprietary identification, or the carcinogen and percent.
2. Containers of 4,4'-Methylene bis (2-chloroaniline) and containers required under subsections (2)(d)5., (2)(f)7.b., and (2)(g)3 of this section which are accessible to, or handled by employees other than authorized employees or employees trained in accordance with paragraph (e) of this subsection shall have contents identification which includes the full chemical name and Chemical Abstracts Service Registry number as listed in paragraph (1)(a) of this section.
3. Containers shall have the warning words "**CANCER-SUSPECT AGENT**" displayed immediately under or adjacent to the contents identification.
4. Containers which have 4,4'-Methylene bis (2-chloroaniline) contents with corrosive or irritating properties shall have label statements warning of the hazards, and noting, if appropriate, particularly sensitive or affected portions of the body.

(c) Lettering. Lettering on signs and instructions required by subparagraph (a) of this paragraph shall be a minimum letter height of 2 inches. Labels on containers required under this section shall not be less than 1/2 the size of the largest lettering on the package, and not less than 8 point type in any instance; except that the required lettering shall not have to be more than 1 inch in height.

(d) Prohibited statements. A statement shall not appear on or near any required sign, label, or instruction which contradicts or detracts from the effect of any required warning, information, or instruction.

(e) Training and indoctrination.

1. Each employee, prior to being authorized to enter a regulated area, shall receive a training and indoctrination program including, but not necessarily limited to:
  - a. The nature of the carcinogenic hazards of 4,4'-Methylene bis (2-chloroaniline), including local and systemic toxicity;
  - b. The specific nature of the operation involving 4,4'-Methylene bis (2-chloroaniline) which could result in exposure;
  - c. The purpose for and application of the medical surveillance program, including, as appropriate, methods of self-examination;
  - d. The purpose for and application of decontamination practices and procedures;
  - e. The purpose for and significance of emergency practices and procedures;

- f. The employee's specific role in emergency procedures;
- g. Specific information to aid the employee in recognition and evaluation of conditions and situations which may result in the release of 4,4'-Methylene bis (2-chloroaniline); and
- h. The purpose for and application of specific first-aid procedures and practices.

- 2. Each employee shall receive a review of this section at the employee's first training and indoctrination program and annually thereafter.
- 3. Specific emergency procedures shall be prescribed and posted, and employees shall be familiarized with their terms, and rehearsed in their application.
- 4. All materials relating to the program shall be provided if requested by to authorized representatives of the Assistant Secretary and the Director.

(5) Reports.

(a) Operations. Not later than March 1 of each year the information required in subdivisions 1, 2, 3, and 4 of this subparagraph shall be reported in writing by the employer to the nearest OSHA Area Director. Any change in the reported information shall be similarly reported in writing within fifteen (15) calendar days of the change. The report shall contain the following information:

- 1. A brief description and inplant location of the areas regulated and the address of each regulated area;
- 2. The names and other identifying information as to the presence of 4,4'-Methylene bis (2-chloroaniline) in each regulated area;
- 3. The number of employees in each regulated area, during normal operations including maintenance activities; and
- 4. The manner in which 4,4'-Methylene bis (2-chloroaniline) is present in each regulated area; such as whether it is manufactured, processed, used, repackaged, released, stored, or otherwise handled.

(b) Incidents. Incidents which result in the release of 4,4'-Methylene bis (2-chloroaniline) into any area where employees may be exposed shall be reported in accordance with this paragraph.

- 1. A report of the incident and the facts obtainable at that time, including a report on any medical treatment of affected employees shall be made within twenty-four (24) hours to the nearest OSHA Area Director.
- 2. A written report shall be filed with the nearest OSHA Area Director within fifteen (15) calendar days of the initial report:
  - a. A specification of the amount of material released, the amount of time involved, and an explanation of the procedure used in determining this figure;

- b. A description of the area involved, and the extent of known and possible employee and area contamination;
- c. A report of any medical treatment of affected employees and any medical surveillance program implemented; and
- d. An analysis of the steps to be taken, with specific completion dates, to avoid further similar release.

(6) Medical surveillance. At no cost to the employee, a program of medical surveillance shall be established and implemented for employees considered for assignment to enter regulated areas, and for authorized employees.

(a) Examinations.

- 1. Before an employee is assigned to enter a regulated area, a preassignment physical examination by a physician shall be provided. The examination shall include the personal history of the employee, family and occupational background, including genetic and environmental factors.
- 2. Authorized employees shall be provided with periodic physical examinations at least annually, following the preassignment examination.
- 3. In all physical examinations, the examining physician shall consider whether there exist conditions of increased risk, including reduced immunological competence, current treatment with steroids or cytotoxic agents, pregnancy, and cigarette smoking.

(b) Records.

- 1. Employers of employees examined pursuant to this subsection shall maintain complete and accurate records of all medical examinations. Records shall be maintained for the duration of the employee's employment. If the employee's employment is terminated, including by retirement or death, or if the employer ceases business without a successor, records, or notarized true copies thereof, shall be forwarded by registered mail to the Director.
- 2. Records required by this paragraph shall be provided if requested by authorized representatives of the Assistant Secretary or the Director; and if requested by an employee or former employee, the records shall be provided to a physician designated by the employee or to a new employer.
- 3. Any physician who conducts a medical examination required by this subsection shall furnish to the employer a statement of the employee's suitability for employment in the specific exposure.

**Section 3. Laboratory Activities.**

The requirements of this section shall apply to research and quality control activities involving the use of chemicals covered by 29 C.F.R. 1910.1003-.1016.

- (1) Mechanical pipetting aids shall be used for all pipetting procedures.
- (2) Experiments, procedures, and equipment which could produce aerosols shall be confined to laboratory-type hoods or glove boxes.
- (3) Surfaces on which chemicals covered by 29 C.F.R. 1910.1003-.1016 are handled shall be protected from contamination.
- (4) Contaminated wastes and animal carcasses shall be collected in impervious containers which are closed and decontaminated prior to removal from the work area. Such wastes and carcasses shall be incinerated so that no carcinogenic products are released.
- (5) All other forms of chemicals covered by 29 C.F.R. 1910.1003-.1016 shall be inactivated prior to disposal.
- (6) Laboratory vacuum systems shall be protected with high-efficiency scrubbers or with disposal absolute filters.
- (7) Employees engaged in animal support activities shall be:
  - (a) Provided with and required to wear, a complete protective clothing change, clean each day, including coveralls, or pants and shirt, foot covers, head covers, gloves, and appropriate respiratory protective equipment or devices;
  - (b) Prior to each exit from a regulated area, employees shall be required to remove and leave protective clothing and equipment at the point of exit and at the last exit of the day, to place used clothing and equipment in impervious containers at the point of exit for decontamination or disposal. The contents of such impervious containers shall be identified as required under Section 2, subsection (4)(b), (c), and (d) of this administrative regulation; and
  - (c) Required to wash hands, forearms, face, and neck upon each exit from the regulated area close to the point of exit, and before engaging in other activities; and
  - (d) Required to shower after the last exit of the day.
- (8) Employees, except for those engaged only in animal support activities, each day shall be:
  - (a) Provided with and required to wear a clean change of appropriate laboratory clothing, such as a solid front gown, surgical scrub suit, or fully buttoned laboratory coat;

(b) Required prior to each exit from a regulated area, to remove and leave protective clothing and equipment at the point of exit and at the last exit of the day, to place used clothing and equipment in impervious containers at the point of exit for decontamination or disposal. The contents of such impervious containers shall be identified as required under Subsection (4)(b), (c), and (d) of this administrative regulation; and

(c) Required to wash hands, forearms, face, and neck upon each exit from the regulated area close to the point of exit, and before engaging in other activities.

(9) Air pressure in laboratory areas and animal rooms where chemicals covered by 29 C.F.R. 1910.1003-.1016 are handled and bioassay studies are performed shall be negative in relation to the pressure in surrounding areas. Exhaust air shall not be discharged to regulated areas, nonregulated areas, or the external environment unless it is decontaminated.

(10) There shall not be a connection between regulated areas and any other areas through the ventilation system.

(11) A current inventory of chemicals covered by 29 C.F.R. 1910.1003-.1016 shall be maintained.

(12) Ventilated apparatus such as laboratory-type hoods, shall be tested at least semi-annually or immediately after ventilation modification or maintenance operations, by personnel fully qualified to certify correct containment and operation.

**29 CFR 1910.1020**  
**ACCESS TO EMPLOYEE EXPOSURE & MEDICAL RECORDS**

**29 CFR 1910.1020(e)(1)(i)**

Amended by **803 KAR 2:320 Section 4(2)** so that it reads:

Whenever an employee or designated representative requests access to an exposure or medical record, the employer shall assure that access is provided in a reasonable time, place, and manner, but not longer than fifteen (15) days after the request for access is made unless sufficient reason is given why such a time is unreasonable or impractical.

**29 CFR 1910.1020(e)(1)(ii)**

Amended by **803 KAR 2:320 Section 4(4)** so that it reads:

Whenever an employee or designated representative requests a copy of a record, the employer shall, except as specified in (v) of this section, within the period of time previously specified assure that either:

**29 CFR 1910.1030**  
**BLOODBORNE PATHOGENS**

**29 CFR 1910.1030(d)(3)(ix)**

Amended by **803 KAR 2:320 Section 5(2)** so that it reads:

Gloves shall be worn when it can be reasonably anticipated that the employees may have hand contact with blood, other potentially infectious materials, mucous membranes, and non-intact skin when performing vascular access procedures and when handling or touching contaminated items or surfaces.

**29 CFR 1910.1030(d)(3)(ix)(D)**

Removed by **803 KAR 2:320 Section 6(1)**

## **PART 3     State Specific Regulations Applicable to Construction**

### **803 KAR 2:016 CONSTRUCTION INDUSTRY STANDARDS**

#### **Section 1. Safety and Testing of Supply Lines in Excess of 600 Volts.**

##### **(1) Definitions.**

- (a) **Disconnected** means disconnected from any electrical source of supply.
- (b) **Guarded:** protected by personnel, covered, fenced, or enclosed by means of suitable castings, barrier, rails, screens, mats, platforms, or other suitable devices in accordance with standard barricading techniques designed to prevent dangerous approach or contact by persons or objects. (Note: Wires, which are insulated but not otherwise protected, are not considered as guarded.)
- (c) **Hold cards:** (also called "**hold tags**") a card or tag-type device, usually having a predominant color of white or red which warns against or which cautions against the operation of a particular switch, device, circuit, tool, machine, etc.
- (d) **Near:** a distance no closer than that shown in the table in subsection (3)(c) of this section.
- (e) **Qualified person:** a person who, because of experience and training is familiar with the construction and operation of the apparatus or equipment and the hazards involved in the performance of the job.

##### **(2) Purpose.**

- (a) The intent and purpose of this regulation is to provide and establish safety procedures for testing equipment to protect electrical workers from hazards resulting from exposure to high voltage.
- (b) This regulation shall apply to nonutility electrical workers who are engaged in electrical construction and/or maintenance of electrical conductors and equipment rated at 600 volts and above.

##### **(3) Energized conductors and equipment.**

- (a) Only qualified employees shall work on or near high voltage conductors or equipment.
- (b) Personal protective equipment shall be provided by the employer and used by the employee when working on or near energized, ungrounded high voltage conductors or equipment.



<b>Minimum Clear Distance From Live Parts</b>	
<b>Voltage Phase to Phase (Kilovolts)</b>	<b>Distance Phase to Employee</b>
0.6 to 34.5	2'
34.5 to 46	2 1/2'
46 to 69	3'
69 to 115	3' 4"
115 to 138	3' 6"
138 to 169	3' 8"

(c) No employee shall approach or take any conductive object, without an approved insulating handle, within the minimum distance specified in the table below, unless the energized part is insulated or guarded from the employee, or the employee is effectively insulated from the live parts. Rubber gloves (sleeves if necessary) rated for the voltage involved shall be considered effective insulation of the employee from the energized part.

**(4) Deenergized conductor or equipment.**

(a) Existing conditions shall be determined before starting work on electrical conductor and/or equipment.

(b) Before any work is performed, all electrical switches, breakers and associated disconnecting devices shall be opened, made inoperable and hold tagged out by the person in charge. Employees shall be trained and thoroughly instructed in the tagging procedure. One (1) qualified person, for example: foreman, general foreman or first class electrician, of each crew shall be responsible for attaching hold tags and/or hold cards to the disconnecting means. When more than one (1) crew is involved in the work, multiple hold tags or hold cards shall be placed in the handle of the disconnecting equipment. The use of such tags must be respected. Equipment or items so tagged must not be activated or used without full and proper authority of a responsible person whose signature appears on the tag.

(c) Conductors shall be short-circuited and grounded wherever possible.

(d) Capacitors may be components of apparatus of the disconnected electrical system. Before employees are allowed to work, the capacitors shall be discharged, short-circuited and grounded.

(e) When deenergizing conductors and equipment and the means of disconnecting from the energy source is not visibly open, a voltage test shall be made before starting work. An operational check shall be made of the voltage tester prior to and following the voltage test to determine reliability of the testing device. The test device must be handled and used while wearing or using approved protective equipment during the test.

(f) All conductors and equipment shall be treated as energized until tested, short-circuited and effectively grounded except when the circuit involved is isolated from all possible sources of energizing voltage from another circuit, induced voltage or back feed.

(g) The voltage condition of deenergized conductors and/or equipment shall be determined with testing equipment designed for the applicable voltage.

(h) Upon completion of work on deenergized conductors and equipment, the person responsible shall ascertain that all employees under his jurisdiction are clear and that all protective short-circuit and grounding lines are removed. The qualified person(s) shall then remove his hold tag(s). Only at this time shall conductors and equipment be reenergized.

## **803 KAR 2:200**

### **CONFINED SPACE ENTRY**

#### **Section 1. Definitions.**

(1) **Confined space** means a space having the following characteristics:

(a) Limited means for exit and entry; and

(b) Ventilation of the space is lacking or inadequate, allowing for the potential accumulation of toxic air contaminants, flammable or explosive agents, and/or depletion of oxygen.

(2) **Emergency entry** means entry into a confined space necessitated by a sudden and unexpected condition requiring immediate action.

(3) **Toxic air contaminants** means those substances listed in Subpart Z of 29 CFR 1910 as adopted by 803 KAR 2:320; and, whenever a substance is not listed in Subpart Z, those substances with exposure limits listed in the National Institute for Occupational Safety and Health (NIOSH), 1980 "Registry of Toxic Effects of Chemical Substances."

(4) **Lower explosive limit (LEL)** means the minimum concentration of gas or vapor below which propagation of flame does not occur on contact with a source of ignition.

(5) **Zero mechanical state (ZMS)** means the mechanical state of a machine or equipment in which:

(a) Every power source that can produce a machine or equipment member movement has been locked/tagged out as outlined in National Fire Protection Association Pamphlet (NFPA) 70-E-1981, Part II, Chapter 4, or American National Standard Z244.1-1982;

(b) Pressurized fluid (air, oil, or other) power lockoffs (shutoff valves), if used, will block pressure from the power source and will reduce pressure on the machine or equipment side port of that valve by venting to atmosphere or draining to tank;

(c) All accumulators and air surge tanks are reduced to atmospheric pressure or are treated as power sources to be locked/tagged out, as outlined in National Fire Protection Association Pamphlet (NFPA) 70-E-1981, Part II, Chapter 4, or American National Standard Z244.1-1982;

(d) The mechanical potential energy of all portions of the machine or equipment is at its lowest practical value so that the opening of the pipe(s), tube(s), hose(s), or actuation of any valve or lever will not produce a movement which could cause injury;

(e) Pressurized fluid (air, oil, or other) trapped in the machine or equipment lines, cylinders, or other components is not capable of producing a machine motion upon actuation of any valve or lever;

(f) The kinetic energy of the machine or equipment members is at its lowest practical value;

(g) Loose or freely movable machine or equipment members are secured against accidental movement; and

(h) A workpiece or material support, retained or controlled by the machine or equipment, shall be considered as part of the machine or equipment if the workpiece or material can move or can cause machine or equipment movement.

(6) **Agricultural production operation** means establishments engaged primarily in the production of crops and/or livestock.

## **Section 2. Application and Scope.**

(1) This regulation applies only to those confined spaces, as defined in Section 1(1) of this regulation, which are not specifically covered by other regulations adopted by this chapter, such as in the construction industry standards, 29 CFR 1926.

(2) This administrative regulation does not apply to agricultural production operations.

(3) This regulation does not apply to employers in general industry who are covered by 29 CFR 1910.146, "Permit-Required Confined Spaces", as adopted by 803 KAR 2:309.

(4) This regulation does not preempt any specific applicable regulation.

## **Section 3. Confined Space Entry: Nonemergency and Nonrescue.**

Except as provided in Section 4 of this regulation, entry into a confined space shall not be made unless the following procedures have been accomplished:

(1) All pipes, lines, or other connections which may carry harmful agents into the confined space have been disconnected or blocked by some means which assures complete closure. In continuous systems, such as but not limited to sewers or utility tunnels, where complete isolation is not possible, written safety procedures to ensure employees' safety and health shall be developed and administered.

(2) Fixed mechanical devices or equipment that are capable of causing injury shall be placed at zero mechanical state (ZMS). The electrical equipment, excluding lighting, shall be locked out or tagged out in accordance with National Fire Protection Pamphlet (NFPA) 70-E-1981, Part II, Chapter 4, or American National Standard Z244.1-1982.

(3) The internal atmosphere of the confined space shall be tested for oxygen content, flammable or explosive agents, or any toxic air contaminant(s) of which an employer, who is or should be reasonably familiar with the practices, procedures, and methods of operation in the industry, has or should have knowledge. If the oxygen content is less than nineteen and five-tenths (19.5) percent (148 mm Hg), or if the flammable or exposure agents are detected in excess of twenty-five (25) percent of the lower explosive limit (LEL), or if the toxic air contaminant(s) are present in levels which exceed allowable limits as set forth in 29 CFR 1910, Subpart Z as adopted by 803 KAR 2:320, and whenever a substance is not listed in Subpart Z, the exposure levels listed in the National Institute for Occupational Safety and Health (NIOSH), 1980 "Registry of Toxic Effects of Chemical Substances," the following provisions apply:

(a) The confined space shall be ventilated until the unsafe condition(s) are eliminated, and the ventilation shall be continued as long as there is a possibility of recurrence of the unsafe condition(s) while the confined space is occupied by employee(s).

(b) If oxygen deficiency or toxic air contaminant level(s) cannot be eliminated by ventilation, or as an alternative to ventilation, employee(s) may be allowed to enter a confined space only with appropriate respiratory protection. Respirator usage shall be in accordance with the requirements of 29 CFR 1910.134 as adopted by 803 KAR 2:308. Respiratory protection shall be provided and maintained at no cost to employee(s). If a self-contained respirator is used, the wearer shall not be permitted to remain within the confined space, when the primary air system is depleted or being replaced. The reserve air supply shall be used only for escape purposes. Employee(s) shall be allowed to enter a confined space containing explosive or flammable agents exceeding twenty-five (25) percent lower explosive limits (LEL), only during emergency or rescue operations.

(4) Provisions shall be made for constant communications: visual, voice and/or other means, between employee(s) within the confined space and an employee in the immediate vicinity outside the confined space.

(5) Provision shall be made for rescue procedures, including rescue equipment and rescue training, as outlined in Section 4 of this regulation.

(6) Ladders or other safe means shall be used to enter and exit confined spaces exceeding four (4) feet in depth.

#### **Section 4. Confined Space Entry: Emergency and Rescue.**

(1) The employer shall establish a written procedure for emergency and rescue methods and operations covering all confined space entries. The procedure shall include at a minimum:

- (a) An assessment of the hazard(s);
- (b) Personnel required to perform the rescue or emergency entry;
- (c) Precautions to be taken while in the confined space;
- (d) Personal protective equipment to be used;
- (e) Rescue equipment such as but not limited to respirators, life lines, safety belts, safety harnesses, wristlets, hoisting equipment when an employee must be lifted vertically, and other equipment; and
- (f) Tools and other equipment to be used.

(2) The employer shall establish a training program to instruct affected employees in the procedures and practices for emergency and rescue confined space entry. The training shall be repeated annually or more often as needed. The employer shall maintain records of the most recent training program conducted. The records shall include the date(s) of the training program, the instructor(s) of the training program, and the employee(s) to whom the training was given.

(3) The employer shall assure that personnel with rescue training, basic first aid, and CPR, in the vicinity of the confined space are readily available to render emergency assistance as may be required.

**803 KAR 2:320**  
**TOXIC & HAZARDOUS SUBSTANCES**

**29 CFR 1910.1030**  
**Bloodborne Pathogens**

**(a) Scope and Application.**

This section applies to all occupational exposure to blood or other potentially infectious materials as defined by paragraph (b) of this section.

**(b) Definitions.**

For purposes of this section, the following shall apply:

**"Assistant Secretary"** means the Commissioner of Labor, Kentucky Department of Labor, or Executive Director, Office of Occupational Safety and Health, Kentucky Department of Labor.

**"Blood"** means human blood, human blood components, and products made from human blood.

**"Bloodborne Pathogens"** means pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV).

**"Clinical Laboratory"** means a workplace where diagnostic or other screening procedures are performed on blood or other potentially infectious materials.

**"Contaminated"** means the presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.

**"Contaminated Laundry"** means laundry which has been soiled with blood or other potentially infectious materials or may contain sharps.

**"Contaminated Sharps"** means any contaminated object that can penetrate the skin including, but not limited to, needles, scalpels, broken glass, broken capillary tubes, and exposed ends of dental wires.

**"Decontamination"** means the use of physical or chemical means to remove, inactivate, or destroy bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal.

**"Director"** means the Director of the National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services, or designated representative.

**"Engineering Controls"** means controls (e.g., sharps disposal containers, self-sheathing needles, safer medical devices, such as sharps with engineered sharps injury protections and needleless systems) that isolate or remove the bloodborne pathogens hazard from the workplace.

**"Exposure Incident"** means a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties.

**"Handwashing Facilities"** means a facility providing an adequate supply of running potable water, soap and single use towels or hot air drying machines.

**"Licensed Healthcare Professional"** is a person whose legally permitted scope of practice allows him or her to independently perform the activities required by paragraph (f) Hepatitis B Vaccination and Post-exposure Evaluation and Follow-up.

**"Needleless Systems"** means a device that does not use needles for:

- (1) the collection of bodily fluids or withdrawal of body fluids after initial venous or arterial access is established;
- (2) the administration of medication or fluids; or
- (3) any other procedure involving the potential for occupational exposure to bloodborne pathogens due to percutaneous injuries from contaminated sharps.

**"HBV"** means hepatitis B virus.

**"HIV"** means human immunodeficiency virus.

**"Occupational Exposure"** means reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.

**"Other Potentially Infectious Materials"** means

- (1) The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids;
- (2) Any unfixed tissue or organ (other than intact skin) from a human (living or dead); and
- (3) HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.

**"Parenteral"** means piercing mucous membranes or the skin barrier through such events as needlesticks, human bites, cuts, and abrasions.

**"Personal Protective Equipment"** is specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes (e.g., uniforms, pants, shirts or blouses) not intended to function as protection against a hazard are not considered to be personal protective equipment.

**"Production Facility"** means a facility engaged in industrial-scale, large-volume or high concentration production of HIV or HBV.

**"Regulated Waste"** means liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or other potentially infectious materials.

**"Research Laboratory"** means a laboratory producing or using research-laboratory-scale amounts of HIV or HBV. Research laboratories may produce high concentrations of HIV or HBV but not in the volume found in production facilities.

**"Sharps with Engineered Sharps Injury Protections"** means a nonneedle sharp or a needle device used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, with a built-in safety feature or mechanism that effectively reduces the risk of an exposure incident.

**"Source Individual"** means any individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to the employee. Examples include, but are not limited to, hospital and clinic patients; clients in institutions for the developmentally disabled; trauma victims; clients of drug and alcohol treatment facilities; residents of hospices and nursing homes; human remains; and individuals who donate or sell blood or blood components.

**"Sterilize"** means the use of a physical or chemical procedure to destroy all microbial life including highly resistant bacterial endospores.

**"Universal Precautions"** is an approach to infection control. According to the concept of Universal Precautions, all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens.

**"Work Practice Controls"** means controls that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g., prohibiting recapping of needles by a two-handed technique).

**(c) Exposure Control.**

**(1) Exposure Control Plan**

(i) Each employer having an employee(s) with occupational exposure as defined by paragraph (b) of this section shall establish a written Exposure Control Plan designed to eliminate or minimize employee exposure.

(ii) The Exposure Control Plan shall contain at least the following elements:

(A) The exposure determination required by paragraph (c)(2),

(B) The schedule and method of implementation for paragraphs (d) Methods of Compliance, (e) HIV and HBV Research Laboratories and Production Facilities, (f) Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-up, (g) Communication of Hazards to Employees, and (h) Recordkeeping, of this standard, and

(C) The procedure for the evaluation of circumstances surrounding exposure incidents as required by paragraph (f)(3)(i) of this standard.

(iii) Each employer shall ensure that a copy of the Exposure Control Plan is accessible to employees in accordance with 29 CFR 1910.20(e).

(iv) The Exposure Control Plan shall be reviewed and updated at least annually and whenever necessary to reflect new or modified tasks and procedures which affect occupational exposure and to reflect new or revised employee positions with occupational exposure. The review and update of such plans shall also:

(A) reflect changes in technology that eliminate or reduce exposure to bloodborne pathogens; and

(B) document annually consideration and implementation of appropriate commercially available and effective safer medical devices designed to eliminate or minimize occupational exposure.

(v) An employer, who is required to establish an Exposure Control Plan shall solicit input from non-managerial employees responsible for direct patient care who are potentially exposed to injuries from contaminated sharps in the identification, evaluation, and selection of effective engineering and work practice controls and shall document the solicitation in the Exposure Control Plan.

(vi) The Exposure Control Plan shall be made available to the Assistant Secretary and the Director upon request for examination and copying.

## (2) Exposure Determination

(i) Each employer who has an employee(s) with occupational exposure as defined by paragraph (b) of this section shall prepare an exposure determination. This exposure determination shall contain the following:

(A) A list of all job classifications in which all employees in those job classifications have occupational exposure;

(B) A list of job classifications in which some employees have occupational exposure, and

(C) A list of all tasks and procedures or groups of closely related task and procedures in which occupational exposure occurs and that are performed by employees in job classifications listed in accordance with the provisions of paragraph (c)(2)(i)(B) of this standard.

(ii) This exposure determination shall be made without regard to the use of personal protective equipment.

## (d) Methods of Compliance.

(1) General. Universal precautions shall be observed to prevent contact with blood or other potentially infectious materials. Under circumstances in which differentiation between body fluid types is difficult or



impossible, all body fluids shall be considered potentially infectious materials.

(2) Engineering and Work Practice Controls

- (i) Engineering and work practice controls shall be used to eliminate or minimize employee exposure. Where occupational exposure remains after institution of these controls, personal protective equipment shall also be used.
- (ii) Engineering controls shall be examined and maintained or replaced on a regular schedule to ensure their effectiveness.
- (iii) Employers shall provide handwashing facilities which are readily accessible to employees.
- (iv) When provision of handwashing facilities is not feasible, the employer shall provide either an appropriate antiseptic hand cleanser in conjunction with clean cloth/paper towels or antiseptic towelettes. When antiseptic hand cleansers or towelettes are used, hands shall be washed with soap and running water as soon as feasible.
- (v) Employers shall ensure that employees wash their hands immediately or as soon as feasible after removal of gloves or other personal protective equipment.
- (vi) Employers shall ensure that employees wash hands and any other skin with soap and water, or flush mucous membranes with water immediately or as soon as feasible following contact of such body areas with blood or other potentially infectious materials.
- (vii) Contaminated needles and other contaminated sharps shall not be bent, recapped, or removed except as noted in paragraphs (d)(2)(vii)(A) and (d)(2)(vii)(B) below. Shearing or breaking of contaminated needles is prohibited.
  - (A) Contaminated needles and other contaminated sharps shall not be recapped or removed unless the employer can demonstrate that no alternative is feasible or that such action as required by a specific medical procedure.
  - (B) Such recapping or needle removal must be accomplished through the use of a mechanical device or a one-handed technique.
- (viii) Immediately or as soon as possible after use, contaminated reusable sharps shall be placed in appropriate containers until properly reprocessed. These containers shall be:
  - (A) puncture resistant;
  - (B) labeled or color-coded in accordance with this standard;
  - (C) leakproof on the sides and bottom; and
  - (D) in accordance with the requirements set forth in paragraph (d)(4)(ii)(E) for reusable sharps.
- (ix) Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are prohibited in work areas where there is a reasonable likelihood of occupational exposure.
- (x) Food and drink shall not be kept in refrigerators, freezers, shelves, cabinets or on countertops or benchtops where blood or other potentially infectious materials are present.

(xi) All procedures involving blood or other potentially infectious materials shall be performed in such a manner as to minimize splashing, spraying, spattering, and generation of droplets of these substances.

(xii) Mouth pipetting/suctioning of blood or other potentially infectious materials is prohibited.

(xiii) Specimens of blood or other potentially infectious materials shall be placed in a container which prevents leakage during collection, handling, processing, storage, transport, or shipping.

(A) The container for storage, transport, or shipping shall be labeled or color-coded according to paragraph (g)(1)(i) and closed prior to being stored, transported, or shipped. When a facility utilizes Universal Precautions in the handling of all specimens, the labeling/color-coding of specimens is not necessary provided containers are recognizable as containing specimens. This exemption only applies while such specimens/containers remain within the facility. Labeling or color-coding in accordance with paragraph (g)(1)(i) is required when such specimens/containers leave the facility.

(B) If outside contamination of the primary container occurs, the primary container shall be placed within a second container which prevents leakage during handling, processing, storage, transport, or shipping and is labeled or color-coded according to the requirements of this standard.

(C) If the specimen could puncture the primary container, the primary container shall be placed within a secondary container which is puncture-resistant in addition to the above characteristics.

(xiv) Equipment which may become contaminated with blood or other potentially infectious materials shall be examined prior to servicing or shipping and shall be decontaminated as necessary, unless the employer can demonstrate that decontamination of such equipment or portions of such equipment is not feasible.

(A) A readily observable label in accordance with paragraph (g)(1)(i)(H) shall be attached to the equipment stating which portions remain contaminated.

(B) The employer shall ensure that this information is conveyed to all affected employees, the servicing representative, and/or the manufacturer, as appropriate, prior to handling, servicing, or shipping so that appropriate precautions will be taken.

### (3) Personal Protective Equipment

(i) Provision. When there is occupational exposure, the employer shall provide, at no cost to the employee, appropriate personal protective equipment such as, but not limited to, gloves, gowns, laboratory coats, face shields or masks and eye protection, and mouthpieces, resuscitation bags, pocket masks, or other ventilation devices. Personal protective equipment will be considered "appropriate" only if it does not permit blood or other potentially infectious materials to pass through to or reach the employee's work clothes, street clothes, undergarments, skin, eyes, mouth, or other mucous membranes under normal conditions of use and for the duration of time which the protective equipment will be used.

(ii) Use. The employer shall ensure that the employee uses appropriate personal protective equipment unless the employer shows that the employee temporarily and briefly declined to use personal protective equipment when, under rare and extraordinary circumstances, it was the employee's professional judgment that in the specific instance its use would have prevented the delivery of health care or public safety services or would have posed an increased hazard to the safety of the worker or co-worker. When the employee makes this judgement, the circumstances shall be investigated and documented in order to determine whether changes can be instituted to prevent such occurrences in the future.

(iii) Accessibility. The employer shall ensure that appropriate personal protective equipment in the appropriate sizes is readily accessible at the worksite or is issued to employees. Hypoallergenic gloves, glove liners, powderless gloves, or other similar alternatives shall be readily accessible to those employees who are allergic to the gloves normally provided.

(iv) Cleaning, Laundering, and Disposal. The employer shall clean, launder, and dispose of personal protective equipment required by paragraphs (d) and (e) of this standard, at no cost to the employee.

(v) Repair and Replacement. The employer shall repair or replace personal protective equipment as needed to maintain its effectiveness, at no cost to the employee.

(vi) If a garment(s) is penetrated by blood or other potentially infectious materials, the garment(s) shall be removed immediately or as soon as feasible.

(vii) All personal protective equipment shall be removed prior to leaving the work area.

(viii) When personal protective equipment is removed it shall be placed in an appropriately designated area or container for storage, washing, decontamination or disposal.

(ix) Gloves. Gloves shall be worn if it can be reasonably anticipated that the employees may have hand contact with blood, other potentially infectious materials, mucous membranes, and nonintact skin if performing vascular access procedures or if handling or touching contaminated items or surfaces.

(A) Disposable (single use) gloves such as surgical or examination gloves, shall be replaced as soon as practical when contaminated or as soon as feasible if they are torn, punctured, or when their ability to function as a barrier is compromised.

(B) Disposable (single use) gloves shall not be washed or decontaminated for re-use.

(C) Utility gloves may be decontaminated for re-use if the integrity of the glove is not compromised. However, they must be discarded if they are cracked, peeling, torn, punctured, or exhibit other signs of deterioration or when their ability to function as a barrier is compromised.

(D) Removed

(x) Masks, Eye Protection, and Face Shields. Masks in combination with eye protection devices, such as goggles or glasses with solid side shields, or chin-length face shields, shall be worn whenever splashes, spray, spatter, or droplets of blood or other potentially infectious materials may be generated and eye, nose, or mouth contamination can be reasonably anticipated.

(xi) Gowns, Aprons, and Other Protective Body Clothing. Appropriate protective clothing such as, but not limited to, gowns, aprons, lab coats, clinic jackets, or similar outer garments shall be worn in occupational exposure situations. The type and characteristics will depend upon the task and degree of exposure anticipated.

(xii) Surgical caps or hoods and/or shoe covers or boots shall be worn in instances when gross contamination can reasonably be anticipated (e.g., autopsies, orthopaedic surgery).

(4) Housekeeping

(i) General. Employers shall ensure that the worksite is maintained in a clean and sanitary condition. The employer shall determine and implement an appropriate written schedule for cleaning and method of decontamination based upon the location within the facility, type of surface to be cleaned, type of soil present, and tasks or procedures being performed in the area.

(ii) All equipment and environmental and working surfaces shall be cleaned and decontaminated after contact with blood or other potentially infectious materials.

(A) Contaminated work surfaces shall be decontaminated with an appropriate disinfectant after completion of procedures; immediately or as soon as feasible when surfaces are overtly contaminated or after any spill of blood or other potentially infectious materials; and at the end of the work shift if the surface may have become contaminated since the last cleaning.

(B) Protective coverings, such as plastic wrap, aluminum foil, or imperviously-backed absorbent paper used to cover equipment and environmental surfaces, shall be removed and replaced as soon as feasible when they become overtly contaminated or at the end of the workshift if they may have become contaminated during the shift.

(C) All bins, pails, cans, and similar receptacles intended for reuse which have a reasonable likelihood for becoming contaminated with blood or other potentially infectious materials shall be inspected and decontaminated on a regularly scheduled basis and cleaned and decontaminated immediately or as soon as feasible upon visible contamination.

(D) Broken glassware which may be contaminated shall not be picked up directly with the hands. It shall be cleaned up using mechanical means, such as a brush and dust pan, tongs, or forceps.

(E) Reusable sharps that are contaminated with blood or other potentially infectious materials shall not be stored or processed in a manner that requires employees to reach by hand into the containers where these sharps have been placed.

(iii) Regulated Waste.

(A) Contaminated Sharps Discarding and Containment.

(1) Contaminated sharps shall be discarded immediately or as soon as feasible in containers that are:

(i) Closable;

(ii) Puncture resistant;

(iii) Leakproof on sides and bottom;

(iv) Labeled or color-coded in accordance with paragraph (g)(1)(i) of this standard.

(2) During use, containers for contaminated sharps shall be:

(i) Easily accessible to personnel and located as close as is feasible to the immediate area where sharps are used or can be reasonably anticipated to be found (e.g., laundries);

(ii) Maintained upright throughout use; and

(iii) Replaced routinely and not be allowed to overfill

(3) When moving containers of contaminated sharps from the area of use, the containers shall be:

(i) Closed immediately prior to removal or replacement to prevent spillage or protrusion of contents during handling, storage, transport, or shipping;

(ii) Placed in a secondary container if leakage is possible. The second container shall be:

(A) Closable;

(B) Constructed to contain all contents and prevent leakage during handling, storage, transport, or shipping; and

(C) Labeled or color-coded according to paragraph (g)(1)(i) of this standard.

(4) Reusable containers shall not be opened, emptied, or cleaned manually or in any other manner which would expose employees to the risk of percutaneous injury.

(B) Other Regulated Waste Containment.

(1) Regulated waste shall be placed in containers which are:

(i) Closable;

(ii) Constructed to contain all contents and prevent leakage of fluids during handling, storage, transport or shipping;

(iii) Labeled or color-coded in accordance with paragraph (g)(1)(i) this standard; and

(iv) Closed prior to removal to prevent spillage or protrusion of contents

during handling, storage, transport, or shipping.

(2) If outside contamination of the regulated waste container occurs, it shall be placed in a second container. The second container shall be:

(a) Closable;

(b) Constructed to contain all contents and prevent leakage of fluids during handling, storage, transport or shipping;

(c) Labeled or color-coded in accordance with paragraph (g)(1)(i) of this standard; and

(d) Closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.

(C) Disposal of all regulated waste shall be in accordance with applicable regulations of the United States, States and Territories, and political subdivisions of States and Territories.

(iv) Laundry.

(A) Contaminated laundry shall be handled as little as possible with a minimum of agitation.

(1) Contaminated laundry shall be bagged or containerized at the location where it was used and shall not be sorted or rinsed in the location of use.

(2) Contaminated laundry shall be placed and transported in bags or containers labeled or color-coded in accordance with paragraph (g)(1)(i) of this standard. When a facility utilizes Universal Precautions in the handling of all soiled laundry, alternative labeling or color-coding is sufficient if it permits all employees to recognize the containers as requiring compliance with Universal Precautions.

(3) Whenever contaminated laundry is wet and presents a reasonable likelihood of soak-through or leakage from the bag or container, the laundry shall be placed and transported in bags or containers which prevent soak-through and/or leakage of fluids to the exterior.

(B) The employer shall ensure that employees who have contact with contaminated laundry wear protective gloves and other appropriate personal protective equipment.

(C) When a facility ships contaminated laundry off-site to a second facility which does not utilize Universal Precautions in the handling of all laundry, the facility generating the contaminated laundry must place such laundry in bags or containers which are labeled or color-coded in accordance with paragraph (g)(1)(i).

**(e) HIV and HBV Research Laboratories and Production Facilities.**

(1) This paragraph applies to research laboratories and production facilities engaged in the culture, production, concentration, experimentation, and manipulation of HIV and HBV. It does not apply to clinical or diagnostic laboratories engaged solely in the analysis of blood, tissues, or organs. These requirements apply in addition to the other requirements of the standard.

(2) Research laboratories and production facilities shall meet the following criteria:

(i) Standard Microbiological Practices. All regulated waste shall either be incinerated or decontaminated by a method such as autoclaving known to effectively destroy bloodborne pathogens.

(ii) Special Practices

(A) Laboratory doors shall be kept closed when work involving HIV or HBV is in progress.

(B) Contaminated materials that are to be decontaminated at a site away from the work area shall be placed in a durable, leakproof, labeled or color-coded container that is closed before being removed from the work area.

(C) Access to the work area shall be limited to authorized persons. Written policies and procedures shall be established whereby only persons who have been advised of the potential biohazard, who meet any specific entry requirements, and who comply with all entry and exit procedures shall be allowed to enter the work areas and animal rooms.

(D) When other potentially infectious materials or infected animals are present in the work area or containment module, a hazard warning sign incorporating the universal biohazard symbol shall be posted on all access doors. The hazard warning sign shall comply with paragraph (g)(1)(ii) of this standard.

(E) All activities involving other potentially infectious materials shall be conducted in biological safety cabinets or other physical-containment devices within the containment module. No work with these other potentially infectious materials shall be conducted on the open bench.

(F) Laboratory coats, gowns, smocks, uniforms, or other appropriate protective clothing shall be used in the work area and animal rooms. Protective clothing shall not be worn outside of the work area and shall be decontaminated before being laundered.

(G) Special care shall be taken to avoid skin contact with other potentially infectious materials. Gloves shall be worn when handling infected animals and when making hand contact with other potentially infectious materials is unavoidable.

(H) Before disposal all waste from work areas and from animal rooms shall either be incinerated or decontaminated by a method such as autoclaving known to effectively destroy bloodborne pathogens.

(I) Vacuum lines shall be protected with liquid disinfectant traps and high-efficiency particulate air (HEPA) filters or filters of equivalent or superior efficiency and which are checked routinely and maintained or replaced as necessary.

(J) Hypodermic needles and syringes shall be used only for parenteral injection and aspiration of fluids from laboratory animals and diaphragm bottles. Only needle-locking syringes or disposable syringe-needle units (i.e., the needle is integral to the syringe) shall be used for the injection or aspiration of other potentially infectious materials. Extreme caution shall be used when handling needles and syringes. A needle shall not be bent, sheared, replaced in the sheath or guard, or removed from the syringe following use. The needle and syringe shall be promptly placed in a puncture-resistant container and autoclaved or decontaminated before reuse or disposal.

(K) All spills shall be immediately contained and cleaned up by appropriate professional staff or others properly trained and equipped to work with potentially concentrated infectious materials.

(L) A spill or accident that results in an exposure incident shall be immediately reported to the laboratory director or other responsible person.

(M) A biosafety manual shall be prepared or adopted and periodically reviewed and updated at least annually or more often if necessary. Personnel shall be advised of potential hazards, shall be required to read instructions on practices and procedures, and shall be required to follow them.

(iii) Containment Equipment.

(A) Certified biological safety cabinets (Class I, II, or III) or other appropriate combinations of personal protection or physical containment devices, such as special protective clothing, respirators, centrifuge safety cups, sealed centrifuge rotors, and containment caging for animals, shall be used for all activities with other potentially infectious materials that pose a threat of exposure to droplets, splashes, spills, or aerosols.

(B) Biological safety cabinets shall be certified when installed, whenever they are moved and at least annually.

(3) HIV and HBV research laboratories shall meet the following criteria:

(i) Each laboratory shall contain a facility for hand washing and an eye wash facility which is readily available within the work area.

(ii) An autoclave for decontamination of regulated waste shall be available.

(4) HIV and HBV production facilities shall meet the following criteria:

(i) The work areas shall be separated from areas that are open to unrestricted traffic flow within the building. Passage through two sets of doors shall be the basic requirement for entry into the work area from access corridors or other contiguous areas. Physical separation of the high-containment work area from access corridors or other areas or activities may also be provided by a double-doored clothes-change room (showers may be included), airlock, or other access facility that requires passing through two sets of doors before entering the work area.

(ii) The surfaces of doors, walls, floors and ceilings in the work area shall be water resistant so that they can be easily cleaned. Penetrations in these surfaces shall be sealed or capable of being sealed to facilitate decontamination.



(iii) Each work area shall contain a sink for washing hands and a readily available eye wash facility. The sink shall be foot, elbow, or automatically operated and shall be located near the exit door of the work area.

(iv) Access doors to the work area or containment module shall be self-closing.

(v) An autoclave for decontamination of regulated waste shall be available within or as near as possible to the work area.

(vi) A ducted exhaust-air ventilation system shall be provided. This system shall create directional airflow that draws air into the work area through the entry area. The exhaust air shall not be recirculated to any other area of the building, shall be discharged to the outside, and shall be dispersed away from occupied areas and air intakes. The proper direction of the airflow shall be verified (i.e., into the work area).

(5) Training Requirements. Additional training requirements for employees in HIV and HBV research laboratories and HIV and HBV production facilities are specified in paragraph (g)(2)(ix).

**(f) Hepatitis B Vaccination and Post-exposure Evaluation and Follow-up.**

**(1) General**

(i) The employer shall make available the hepatitis B vaccine and vaccination series to all employees who have occupational exposure, and post-exposure evaluation and follow-up to all employees who have had an exposure incident.

(ii) The employer shall ensure that all medical evaluations and procedures including the hepatitis B vaccine and vaccination series and post-exposure evaluation and follow-up, including prophylaxis, are:

(A) Made available at no cost to the employee;

(B) Made available to the employee at a reasonable time and place;

(C) Performed by or under the supervision of a licensed physician or by or under the supervision of another licensed healthcare professional; and

(D) Provided according to recommendations of the U.S. Public Health Service current at the time these evaluations and procedures take place, except as specified by this paragraph (f).

(iii) The employer shall ensure that all laboratory tests are conducted by an accredited laboratory at no cost to the employee.

**(2) Hepatitis B Vaccination**

(i) Hepatitis B vaccination shall be made available after the employee has received the training required in paragraph (g)(2)(vii)(I) and within 10 working days of initial assignment to all employees who have occupational exposure unless the employee has previously received the complete hepatitis B vaccination series, antibody testing has revealed that the employee is immune, or the vaccine is contraindicated for medical reasons.

(ii) The employer shall not make participation in a prescreening program a prerequisite for receiving hepatitis B vaccination.

(iii) If the employee initially declines hepatitis B vaccination but at a later date while still covered under the standard decides to accept the vaccination, the employer shall make available hepatitis B vaccination at that time.

(iv) The employer shall assure that employees who decline to accept hepatitis B vaccination offered by the employer sign the statement in Appendix A.

(v) If a routine booster dose(s) of hepatitis B vaccine is recommended by the U.S. Public Health Service at a future date, such booster dose(s) shall be made available in accordance with section (f)(1)(ii).

(3) Post-exposure Evaluation and Follow-up. Following a report of an exposure incident, the employer shall make immediately available to the exposed employee a confidential medical evaluation and follow-up, including at least the following elements:

(i) Documentation of the route(s) of exposure, and the circumstances under which the exposure incident occurred;

(ii) Identification and documentation of the source individual, unless the employer can establish that identification is infeasible or prohibited by state or local law;

(A) The source individual's blood shall be tested as soon as feasible and after consent is obtained in order to determine HBV and HIV infectivity. If consent is not obtained, the employer shall establish that legally required consent cannot be obtained. When the source individual's consent is not required by law, the source individual's blood, if available, shall be tested and the results documented.

(B) When the source individual is already known to be infected with HBV or HIV, testing for the source individual's known HBV or HIV status need not be repeated.

(C) Results of the source individual's testing shall be made available to the exposed employee, and the employee shall be informed of applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.

(iii) Collection and testing of blood for HBV and HIV serological status;

(A) The exposed employee's blood shall be collected as soon as feasible and tested after consent is obtained.

(B) If the employee consents to baseline blood collection, but does not give consent at that time for HIV serologic testing, the sample shall be preserved for at least 90 days. If, within 90 days of the exposure incident, the employee elects to have the baseline sample tested, such testing shall be done as soon as feasible.

(iv) Post-exposure prophylaxis, when medically indicated, as recommended by the U.S. Public Health Service;

(v) Counseling; and

(vi) Evaluation of reported illnesses.

(4) Information Provided to the Healthcare Professional

(i) The employer shall ensure that the healthcare professional responsible for the employee's Hepatitis B vaccination is provided a copy of this regulation.

(ii) The employer shall ensure that the healthcare professional evaluating an employee after an exposure incident is provided the following information:

(A) A copy of this regulation;

(B) A description of the exposed employee's duties as they relate to the exposure incident;

(C) Documentation of the route(s) of exposure and circumstances under which exposure occurred;

(D) Results of the source individual's blood testing, if available; and

(E) All medical records relevant to the appropriate treatment of the employee including vaccination status which are the employer's responsibility to maintain.

(5) Healthcare Professional's Written Opinion. The employer shall obtain and provide the employee with a copy of the evaluating healthcare professional's written opinion within 15 days of the completion of the evaluation.

(i) The healthcare professional's written opinion for Hepatitis B vaccination shall be limited to whether Hepatitis B vaccination is indicated for an employee, and if the employee has received such vaccination.

(ii) The healthcare professional's written opinion for post-exposure evaluation and follow-up shall be limited to the following information:

(A) That the employee has been informed of the results of the evaluation; and

(B) That the employee has been told about any medical conditions resulting from exposure to blood or other potentially infectious materials which require further evaluation or treatment.

(iii) All other findings or diagnoses shall remain confidential and shall not be included in the written report.

(6) Medical Recordkeeping. Medical records required by this standard shall be maintained in accordance with paragraph (h)(1) of this section.

**(g) Communication of Hazards to Employees.****(1) Labels and Signs****(i) Labels.**

(A) Warning labels shall be affixed to containers of regulated waste, refrigerators and freezers containing blood or other potentially infectious material; and other containers used to store, transport or ship blood or other potentially infectious materials, except as provided in paragraph (g)(1)(i)(E), (F) and (G).

(B) Labels required by this section shall include the following legend:



(C) These labels shall be fluorescent orange or orange-red or predominantly so, with lettering or symbols in a contrasting color.

(D) Labels required by paragraph (g)(1)(i) shall either be an integral part of the container or shall be affixed as close as feasible to the container by string, wire, adhesive, or other method that prevents their loss or unintentional removal.

(E) Red bags or red containers may be substituted for labels.

(F) Containers of blood, blood components, or blood products that are labeled as to their contents and have been released for transfusion or other clinical use are exempted from the labeling requirements of paragraph (g).

(G) Individual containers of blood or other potentially infectious materials that are placed in a labeled container during storage, transport, shipment or disposal are exempted from the labeling requirement.

(H) Labels required for contaminated equipment shall be in accordance with this paragraph and shall also state which portions of the equipment remain contaminated.

(I) Regulated waste that has been decontaminated need not be labeled or color-coded.

(ii) Signs.

(A) The employer shall post signs at the entrance to work areas specified in paragraph (e), HIV and HBV Research Laboratory and Production Facilities, which shall bear the following legend:



(Name of the Infectious Agent)

(Special requirements for entering the area)

(Name, telephone number of the laboratory director or other responsible person.)

(B) These signs shall be fluorescent orange-red or predominantly so, with lettering or symbols in a contrasting color.

(2) Information and Training

(i) Employers shall ensure that all employees with occupational exposure participate in a training program which must be provided at no cost to the employee and during working hours.

(ii) Training shall be provided as follows:

(A) At the time of initial assignment to tasks where occupational exposure may take place;

(B) Within 90 days after the effective date of the standard; and

(C) At least annually thereafter.

(iii) For employees who have received training on bloodborne pathogens in the year preceding the effective date of the standard, only training with respect to the provisions of the standard which were not included need be provided.

(iv) Annual training for all employees shall be provided within one year of their previous training.

(v) Employers shall provide additional training when changes such as modification of tasks or procedures or institution of new tasks or procedures affect the employee's occupational exposure. The additional training may be limited to addressing the new exposures created.

(vi) Material appropriate in content and vocabulary to educational level, literacy, and language of employees shall be used.

(vii) The training program shall contain at a minimum the following elements:

- (A) An accessible copy of the regulatory text of this standard and an explanation of its contents;
  - (B) A general explanation of the epidemiology and symptoms of bloodborne diseases;
  - (C) An explanation of the modes of transmission of bloodborne pathogens;
  - (D) An explanation of the employer's exposure control plan and the means by which the employee can obtain a copy of the written plan;
  - (E) An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials;
  - (F) An explanation of the use and limitations of methods that will prevent or reduce exposure including appropriate engineering controls, work practices, and personal protective equipment;
  - (G) Information on the types, proper use, location, removal, handling, decontamination and disposal of personal protective equipment;
  - (H) An explanation of the basis for selection of personal protective equipment;
  - (I) Information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine and vaccination will be offered free of charge;
  - (J) Information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials;
  - (K) An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available;
  - (L) Information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident;
  - (M) An explanation of the signs and labels and/or color coding required by paragraph (g)(1); and
  - (N) An opportunity for interactive questions and answers with the person conducting the training session.
- (viii) The person conducting the training shall be knowledgeable in the subject matter covered by the elements contained in the training program as it relates to the workplace that the training will address.
- (ix) Additional Initial Training for Employees in HIV and HBV Laboratories and Production Facilities. Employees in HIV or HBV research laboratories and HIV or HBV production facilities shall receive the following initial training in addition to the above training requirements.

(A) The employer shall assure that employees demonstrate proficiency in standard microbiological practices and techniques and in the practices and operations specific to the facility before being allowed to work with HIV or HBV.

(B) The employer shall assure that employees have prior experience in the handling of human pathogens or tissue cultures before working with HIV or HBV.

(C) The employer shall provide a training program to employees who have no prior experience in handling human pathogens. Initial work activities shall not include the handling of infectious agents. A progression of work activities shall be assigned as techniques are learned and proficiency is developed. The employer shall assure that employees participate in work activities involving infectious agents only after proficiency has been demonstrated.

**(h) Recordkeeping.**

**(1) Medical Records**

(i) The employer shall establish and maintain an accurate record for each employee with occupational exposure, in accordance with 29 CFR 1910.20.

(ii) This record shall include:

(A) The name and social security number of the employee;

(B) A copy of the employee's hepatitis B vaccination status including the dates of all the hepatitis B vaccinations and any medical records relative to the employee's ability to receive vaccination as required by paragraph (f)(2);

(C) A copy of all results of examinations, medical testing, and follow-up procedures as required by paragraph (f)(3);

(D) The employer's copy of the healthcare professional's written opinion as required by paragraph (f)(5); and

(E) A copy of the information provided to the healthcare professional as required by paragraphs (f)(4)(ii)(B)(C) and (D).

(iii) Confidentiality. The employer shall ensure that employee medical records required by paragraph (h)(1) are

(A) Kept confidential; and

(B) Are not disclosed or reported without the employee's express written consent to any person within or outside the workplace except as required by this section or as may be required by law.

(iv) The employer shall maintain the records required by paragraph (h) for at least the duration of employment plus 30 years in accordance with 29 CFR 1910.20.

(2) Training Records

(i) Training records shall include the following information:

- (A) The dates of the training sessions;
- (B) The contents or a summary of the training sessions;
- (C) The names and qualifications of persons conducting the training; and
- (D) The names and job titles of all persons attending the training sessions.

(ii) Training records shall be maintained for 3 years from the date on which the training occurred.

(3) Availability

(i) The employer shall ensure that all records required to be maintained by this section shall be made available upon request to the Assistant Secretary and the Director for examination and copying.

(ii) Employee training records required by this paragraph shall be provided upon request for examination and copying to employees, to employee representatives, to the Director, and to the Assistant Secretary in accordance with 29 CFR 1910.20.

(iii) Employee medical records required by this paragraph shall be provided upon request for examination and copying to the subject employee, to anyone having written consent of the subject employee, to the Director, and to the Assistant Secretary in accordance with 29 CFR 1910.20.

(4) Transfer of Records

(i) The employer shall comply with the requirements involving transfer of records set forth in 29 CFR 1910.20(h).

(ii) If the employer ceases to do business and there is no successor employer to receive and retain the records for the prescribed period, the employer shall notify the Director, at least three months prior to their disposal and transmit them to the Director, if required by the Director to do so, within that three month period.

(5) Sharps Injury Log.

(i) The employer shall establish and maintain a sharps injury log for the recording of percutaneous injuries from contaminated sharps. The information in the sharps injury log shall be recorded and maintained in such manner as to protect the confidentiality of the injured employee. The sharps injury log shall contain, at a minimum:

- (A) the type and brand of device involved in the incident,
- (B) the department or work area where the exposure incident occurred, and
- (C) an explanation of how the incident occurred.



(ii) The requirement to establish and maintain a sharps injury log shall apply to any employer who is required to maintain a log of occupational injuries and illnesses under 29 CFR 1904.

(iii) The sharps injury log shall be maintained for the period required by 29 CFR 1904.6.

**(i) Dates.**

(1) Effective Date. The standard shall become effective on March 6, 1992.

(2) The Exposure Control Plan required by paragraph (c)(2) of this section shall be completed on May 5, 1992.

(3) Paragraph (g)(2) Information and Training and (h) Recordkeeping shall take effect on June 4, 1992.

(4) Paragraphs (d)(2) Engineering and Work Practice Controls, (d)(3) Personal Protective Equipment, (d)(4) Housekeeping, (e) HIV and HBV Research Laboratories and Production Facilities, (f) Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-up, and (g) (1) Labels and Signs, shall take effect on July 6, 1992.

**(j) Appendix.**

**APPENDIX A  
(Mandatory)**

I understand that due to my occupational exposure to blood or other potentially infectious materials I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with hepatitis B vaccine, at no charge to myself. However, I decline hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease. If in the future I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me.

**803 KAR 2:400**  
**GENERAL**

**29 CFR 1926.1**  
**PURPOSE and SCOPE**

Amended by **803 KAR 2:400 Section 1** so that it reads:

**Purpose and Scope.** The provisions of this regulation incorporate and extend the applicability of established federal standards contained in 29 CFR Part 1926 to all employers, employees, and places of employment throughout the Commonwealth except those excluded in KRS 338.021.

**803 KAR 2:412**  
**FALL PROTECTION**

**29 CFR 1926.501(b)(13)**  
**Residential Construction**  
Amended by **803 KAR 2:412**

**Section 1. Definitions.**

- (1) "**C.F.R.**" means Code of Federal Regulations.
- (2) "**Eave**" means the horizontal lower edge of a roof.
- (3) "**Employee**" is defined in KRS 338.015(2).
- (4) "**Employer**" is defined in KRS 338.015(1).
- (5) "**Fall restraint system**" means a system that:
  - (a) Is used to prevent an employee from falling any distance consisting of an anchorage, connectors, and body belt or harness; and
  - (b) May include, lanyards, lifelines, or rope grabs designed for that purpose.
- (6) "**Guardrail system**" is defined in 29 C.F.R. 1926.500(b).
- (7) "**Leading edge**" is defined in 29 C.F.R. 1926.500(b).
- (8) "**Personal fall arrest system**" is defined in 29 C.F.R. 1926.500(b).
- (9) "**Rake edge**" means the roof edge at the gable end of a structure.
- (10) "**Residential construction**" means construction work on a stand alone single family dwelling, duplex, threeplex, or fourplex structure.
- (11) "**Roofing work**" is defined in 29 C.F.R. 1926.500(b).
- (12) "**Safety monitoring system**" is defined in 29 C.F.R. 1926.500(b).
- (13) "**Safety net system**" means a system used in accordance with 29 C.F.R. 1926.502(c).
- (14) "**Slide guard system**" means an equipment system that:
  - (a) Is designed to prevent employees from sliding off a sloped roof to a lower level; and
  - (b) Consists of manufactured roof brackets used in conjunction with dimensional lumber or may be a site-built system of similar design and dimension.

(15) "**Slope**" means the roof vertical rise in inches for every horizontal twelve (12) inch length, with:

- (a) The horizontal twelve (12) inch length referred to as the run;
- (b) The slope referred to as pitch; and
- (c) The slope expressed with the rise (vertical) mentioned first and the run (horizontal) mentioned second, such as "4 in 12" or "4 on 12" and written as "4 in 12" or "4:12" or "4/12."

(16) "**Standard**" is defined in KRS 338.015(3).

(17) "**Three (3) points of contact**" means either:

- (a) One (1) hand and both feet; or
- (b) One (1) foot and both hands.

(18) "**Visible defect**" means saw cuts, warps, twists, holes, splits, breaks, or gouges.

(19) "**Walking/working surface**" is defined in 29 C.F.R. 1926.500(b).

**Section 2.** (1) The construction industry shall comply with the following federal regulations, except as modified by the definitions in Section 1 and requirements of Section 3 of this administrative regulation:

- (a) 29 C.F.R. 1926.500 through 29 C.F.R. 1926.501(b)(12), revised July 1, 2005; and
- (b) 29 C.F.R. 1926.501(b)(14) through 29 C.F.R. 1926.503, revised July 1, 2005.

(2) An employer may utilize Appendices A, B, C, D, and E to Subpart M of 29 C.F.R. Part 1926, revised July 1, 2005, except the Sample Fall Protection Plan for Residential Construction found in Appendix E.

(3) The Non-Mandatory Sample Fall Protection Plan for Residential Construction may be used and is incorporated by reference in Section 4 of this administrative regulation.

**Section 3. Residential Construction. (1) General.** (a) While engaged in residential construction activities, employees working ten (10) feet or more above a lower level shall be protected by guardrail systems, safety net systems, personal fall arrest systems, or a measure provided in this section while exposed to any of the following:

- 1. Unprotected sides and edges;
- 2. Leading edges;
- 3. Hoist areas;
- 4. Form work and reinforcing steel; or
- 5. Roofing work on roof slopes three (3) in twelve (12) or less.

(b) The employer shall use a measure that meets the criteria established in this section and shall not be required to demonstrate that it is infeasible or creates a greater hazard to use guardrail systems, safety net systems, or personal fall arrest systems before using a measure provided in this section.

(c) If an employer can demonstrate that it is infeasible or creates a greater hazard to use guardrail systems, safety net systems, personal fall arrest systems, or a measure established in this section, for a particular workplace situation, the employer shall develop and implement a written fall protection plan which meets the requirements of 29 C.F.R. 1926.502(k) for a particular workplace situation in lieu of implementing guardrail systems, safety net systems, personal fall arrest systems, or a measure provided in this section.

**(2) Floor system.** (a) Employees engaged in residential construction floor system work exposed to a fall hazard ten (10) feet or more above a lower level to the exterior of the structure being constructed shall be protected by guardrail systems, safety net systems, personal fall arrest systems, or personal fall restraint systems.

(b) Employees engaged in residential construction floor system work exposed to an interior fall hazard ten (10) feet or more above a lower level shall be protected by guardrail systems, safety net systems, personal fall arrest systems, personal fall restraint systems, or, if the floor joists or trusses are eighteen (18) inches on center or less, the measures established in this paragraph.

1. The first joist or truss shall be placed into position and secured by workers on the ground, from ladders, or from a scaffold system.
2. Successive joists or trusses shall be placed into position and then secured from a secured temporary platform.
3. The temporary platform shall be at least eighteen (18) inches wide and secured.
4. An employee performing the work shall work from the platform and remain on the platform.

(c) Employees engaged in leading edge residential construction floor system work ten (10) feet or more above a lower level shall be protected by guardrail systems, safety net systems, personal fall arrest systems, personal fall restraint systems, or, if the floor joists or trusses are eighteen (18) inches on center or less, the measures established in this paragraph.

1. The first row of floor sheathing shall be placed into position, installed, and secured from the ground, from ladders, from a scaffold system, or from a secured temporary platform at least eighteen (18) inches wide.
2. An employee performing the work shall work from the platform and remain on the platform.
3. After the first row of sheathing has been installed and secured, only employees performing the installation shall work from the established and secured deck or from a secured temporary platform at least eighteen (18) inches wide.
4. After two (2) rows of sheathing have been installed, only an employee performing the installation shall work from the established and secured deck or from a secured temporary platform at least eighteen (18) inches wide.
5. All other employees shall remain at least four (4) feet away from the leading edge.

**(3) Roof system.** (a) Employees engaged in residential construction roof truss or rafter work ten (10) feet or more above a lower level shall:

1. Be protected by guardrail systems, safety net systems, personal fall arrest systems; or
2. Personal fall restraint systems or implement the measure established in paragraph (b) of this subsection.

(b) The employee releasing the hoist line or installing the bracing shall:

1. Move or work from within the webbing of the truss or within the rafters on a secured temporary platform at least eighteen (18) inches wide; or
2. Maintain three (3) points of contact while moving or working within the webbing of the trusses or within the rafters.

(c) Employees shall not move or work outside the webbing of the trusses or outside the rafters unless utilizing a personal fall arrest system or personal fall restraint system.

(d) Employees engaged in roof sheathing may utilize a slide guard system in accordance with the provisions established in subsection (6) of this section.

(e) Employees engaged in residential construction attic work ten (10) feet or more above a lower level shall be protected by guardrail systems, safety net systems, personal fall arrest systems, personal fall restraint systems, or the measures established in this paragraph.

1. Employees shall move or work from within the webbing of the trusses or within the rafters on a secured temporary platform at least eighteen (18) inches wide.
2. Employees shall remain on the platform while performing the work.

**(4) Roofing work.** (a) Supplies or materials shall not be placed or stored within six (6) feet of the roof edge.

(b) A person shall not ascend, work on, or descend the roof within six (6) feet of the rake edge except while applying or removing roofing materials or equipment.

(c) Warning line systems. 1. Employees engaged in residential construction roofing work ten (10) feet or more above a lower level on roof slopes three (3) in twelve (12) or less shall be protected by guardrail systems, safety net systems, personal fall arrest systems, personal fall restraint systems, or a combination of warning line system and guardrail system, warning line system and safety net system, warning line system and personal fall arrest system, warning line system and personal fall restraint system, or warning line system and safety monitoring system. On roofs fifty (50) feet or less in width, a safety monitoring system alone may be used. Appendix A to Subpart M of 29 C.F.R. Part 1926, revised July 1, 2005, may be used as a guideline to determine roof width.

2. Employees performing residential construction roofing work between a roof edge and a warning line shall be protected by guardrail systems, safety net systems, personal fall arrest systems, or personal fall restraint systems.

**(5) Slide guard systems.** (a) Employers and employees installing residential construction roof sheathing with a ground to eave height up to twenty-five (25) feet or engaged in residential construction roofing work with a ground to eave height up to twenty-five (25) feet may utilize a slide guard system in accordance with the provisions established in this subsection with a safety monitor system meeting the requirements of 29 C.F.R. 1926.502(h)(1) through (h)(4).

(b) Slide guards systems shall not be used with a slope less than four (4) in twelve (12) or greater than eight (8) in twelve (12).

(c) Employers and employees installing residential construction roof sheathing who utilize a slide guard system shall install the slide guard system immediately after the first row of sheathing is installed.

(d) Slide guard systems shall comply with the following provisions.

1. Each slide guard system shall be installed, utilized, and removed under the supervision of a competent person.
2. Each slide guard system shall be used in accordance with the manufacturer's specifications, limitations, and recommendations.
3. Each slide guard system shall be maintained in accordance with the manufacturer's specifications and recommendations.
4. The manufacturer's specifications shall be available at the jobsite for review if the slide guard system is not utilized and maintained in accordance with this subsection.
5. Each slide guard system shall be inspected for visible defects by a competent person before each work shift and after any occurrence which could affect the slide guard system's structural integrity.
6. For each slide guard system, each damaged or weakened component shall be immediately replaced or repaired.
7. For each slide guard system, if replacement or repair of a damaged or weakened component is not feasible, work shall be suspended until:
  - a. The damaged or weakened component is replaced or repaired; or
  - b. Another form of fall protection is utilized.
8. The face of all slide guard members shall be ninety (90) degrees perpendicular to the roof surface.
9. Unless required otherwise by the manufacturer's specifications, all perpendicular slide guard members shall:
  - a. Be number two (2) or better construction grade lumber;
  - b. Have a minimum dimension of two (2) inches nominal by six (6) inches nominal;

- c. Use lumber that is free from cracks or other visible defects; and
  - d. Use other type of material that meets the same dimensions and is equivalent in strength, with the engineering specifications available at the site for review.
- 10. All perpendicular slide guard members shall be secured to the brackets and protected against cantilevering or failure due to material flex.
- 11. All slide guard systems shall be on the same walking/working surface as the employee being protected.
- 12. A continuous slide guard system below the walking or working area shall be installed along the eave no closer than six (6) inches from the eave and remain in place until the work is completed.
- 13. Additional continuous slide guards systems shall be installed below each walking or working area no more than eight (8) feet apart vertically.
- 14. The additional slide guards shall be installed using the following procedure:
  - a. The employee, while standing on the slide guard below, shall secure the roof bracket, or jack, for the next slide guard;
  - b. The employee shall install and secure the next perpendicular slide guard member;
  - c. The employee shall then climb up to the new slide guard to continue work;
  - d. This sequence shall be repeated as work proceeds up the roof;
  - e. Once the work is complete and the slide guards are to be removed, the employee shall climb down to the next lower slide guard;
  - f. The employee shall remove the perpendicular slide guard member from the slide guard above;
  - g. The employee shall remove the roof brackets, or jacks, above;
  - h. The employee shall repeat the sequence down the roof; and
  - i. When all above slide guards have been removed, the slide guards at the eave shall be removed.
- 15. Manufactured roof brackets, or jacks, shall:
  - a. Be a minimum of six (6) inch brackets;
  - b. Be secured according to the manufacturer's specifications, limitations, and recommendations;
  - c. Bear on a solid surface so that all anchors penetrate the roof's surface and the rafter or truss below, unless specified otherwise by the manufacturer's specifications;



- d. Not be spaced greater than eight (8) feet apart horizontally or according to the manufacturer's specifications, whichever is less; and,
- e. Have the manufacturer's specifications available at the jobsite for review if the manufactured roof brackets, or jacks, are not utilized in accordance with the provisions established in this subparagraph.

16. Nonmanufactured, job, or site made slide guard systems shall comply with the provisions established in this subparagraph.

- a. Horizontal members shall be anchored with a minimum of two (2) sixteen (16) "penny", or 16d, common nails at least every four (4) feet so that all nails penetrate the roof's surface and the rafter or truss below.
- b. The face of all slide guard members shall be ninety (90) degrees perpendicular to the roof surface.
- c. Horizontal and perpendicular members shall be number two (2) or better construction grade lumber and have a minimum dimension of two (2) inches nominal by six (6) inches nominal.
- d. Perpendicular members shall be anchored to the horizontal members with a minimum of one (1) sixteen (16) "penny", or 16d, common nail at least every two (2) feet.
- e. The perpendicular member shall be provided with support bracing at least every six (6) feet.
- f. More than one (1) person shall not occupy any given eight (8) feet of a job made slide guard system.
- g. Engineering specifications shall be available at the site for review if the design or installation does not meet the minimum specifications established in this subparagraph. An engineer's seal shall not be required. Engineering specifications shall establish that nonmanufactured, job, or site made slide guard systems shall be equivalent to a system constructed in accordance with the provisions established in this subparagraph.

**Section 4. Incorporation by Reference.** (1) A "Non-Mandatory Sample Fall Protection Plan for Residential Construction," August 2005, is incorporated by reference.

(2) This material may be inspected, copied, or obtained, subject to applicable copyright law, at the Department of Labor, 1047 US Highway 127 South, Suite 4, Frankfort, Kentucky 40601, Monday through Friday, 8 a.m. to 4:30 p.m., or from the agency's Web site at [www.labor.ky.gov](http://www.labor.ky.gov).

**Non-Mandatory Sample Fall Protection Plan for Residential Construction**

August 2005

Employers engaged in residential construction work who demonstrate that it is infeasible or creates a greater hazard to use fall protection systems or a measure provided in 803 Kentucky Administrative Regulation 2:412, must develop and implement a written fall protection plan. This non-mandatory Fall Protection Plan for Residential Construction is a sample program intended to provide guidance to employers on the type of information that is required to be discussed in fall protection plans. This sample plan outlines the minimum elements that must be addressed in any fall protection plan.

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**(Company Name)**

This Fall Protection Plan is for:

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**(Location of Job)**

Plan Prepared by:

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**(Name of Qualified Person)**

Date Plan Prepared:

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Plan Implemented by:

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**(Name of Competent Person)**

Date Plan Change Made:

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Plan Change Approved by:

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**(Name of Qualified Person)**

### COMPANY POLICY

\_\_\_\_\_ is dedicated to the protection of its employees from on-the-job injuries.  
(Company Name)

All employees of \_\_\_\_\_ have the responsibility to work safely on the job. The  
(Company Name)

purpose of this Fall Protection Plan is to supplement our existing safety and health program and to ensure

that every employee who works for \_\_\_\_\_ recognizes workplace fall hazards and  
(Company Name)

takes the appropriate measures to address those hazards.

### IMPLEMENTATION

This Plan is designed to enable employees to recognize the fall hazards associated with this job and to establish the safest procedures that are to be followed in order to prevent falls.

It is the responsibility of \_\_\_\_\_ to implement this Fall Protection Plan. Continual  
(Name of Competent Person)

observational safety checks of work operations and the enforcement of this Plan shall be regularly

enforced. \_\_\_\_\_ is responsible for correcting any unsafe practices or conditions  
(Name of Competent Person)

immediately. Any changes to this Plan must be approved by \_\_\_\_\_.  
(Name of Qualified Person)

It is the responsibility of the employer to ensure that all employees understand and adhere to the

procedures of this Plan and to follow the instructions of \_\_\_\_\_. It is the  
(Name of Competent Person)

responsibility of each employee to bring attention to any unsafe or hazardous conditions or practices that may cause injury to either themselves or any other employees. Each employee will be trained in these procedures established in this Plan and will strictly adhere to them except when doing so would expose the employee to a greater hazard. If, in the employee's opinion, this is the case, the employee is to notify

\_\_\_\_\_ of their concern and have the concern addressed before proceeding.  
(Name of Competent Person)

**INFEASIBILITY/GREATER HAZARD**

During residential construction, sometimes it is infeasible or creates a greater hazard to use fall protection systems or a measure established in 803 KAR 2:412 at specific areas of the job. This Fall Protection Plan addresses the use of fall protection on this project and those locations that require alternative means of fall protection. In the locations identified in this Plan, fall protection systems or a measure established in 803 KAR 2:412 is infeasible / creates a greater hazard.

(Choose and circle one)

**ALTERNATIVE MEASURE(s)**

This Plan establishes the safest procedures to be followed at the work site to prevent falls when it is infeasible or creates a greater hazard to comply with 803 KAR 2:412. These alternative measures reduce the risk of falling and are designed to accomplish the work with minimum employee exposure to fall hazards. Possible alternative measures include, but are not limited to scaffolds, scissor lifts, aerial lifts, use of ladders, and safety monitor system with warning line system, and catch platforms.

**CONTROLLED ACCESS ZONE(s)**

When using this Plan, employees must be protected through limited access to high hazard locations.

Before any alternatives are used as part of this Plan, a controlled access zone (CAZ) shall be clearly

defined and under the control of \_\_\_\_\_. The demarcation of the CAZ shall be in  
(Name of Competent Person)

accordance with 29 CFR 1926.502(g). All access to the CAZ is restricted to authorized entrants. All

workers who are permitted in the CAZ shall be listed in the appropriate sections of this Plan and be

identifiable by \_\_\_\_\_ prior to implementation of the CAZ.  
(Name of Competent Person)

\_\_\_\_\_ shall ensure that all protective elements of the CAZ are  
(Name of Competent Person)

implemented prior to the beginning of work.

Location 1: \_\_\_\_\_

**Infeasible / Creates a Greater Hazard**  
**(Choose and circle one)**

Reason(s):

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Alternative Measure(s):

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Authorized CAZ Entrant(s):

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Location 2: \_\_\_\_\_

**Infeasible / Creates a Greater Hazard**  
**(Choose and circle one)**

Reason(s): \_\_\_\_\_

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Alternative Measure(s):

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Authorized CAZ Entrant(s):

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### **ENFORCEMENT**

Constant awareness of and respect for fall hazards and compliance with all safety rules are considered

conditions of employment. \_\_\_\_\_ reserves the right to discipline employees,  
**(Company Name)**

including, but not limited to, warnings up to and including, termination, for failure to follow this Plan.

### **ACCIDENT INVESTIGATIONS**

All accidents that result in injury to workers, regardless of their nature, shall be immediately reported.

If a fall or some other related incident occurs, such as a near miss, it will be investigated and documented.

It is an integral part of this Plan that documentation take place as soon as possible so that the cause and means of prevention can be identified to prevent similar types of falls or incidents. This Plan shall be reviewed to determine if additional practices, procedures, or training is needed to prevent similar types of falls or incidents from occurring.

### **CHANGES TO PLAN**

Any changes to this Plan will be approved by \_\_\_\_\_. This Plan shall be reviewed  
**(Name of Qualified Person)**

by \_\_\_\_\_ as the job progresses to determine if additional practices, procedures, or  
**(Name of Qualified Person)**

training needs to be implemented by \_\_\_\_\_ to improve or provide additional fall  
**(Name of Competent Person)**

protection. All employees shall be notified and trained in the new procedures. A copy of this Plan and all approved changes shall be maintained at the jobsite.

**803 KAR 2:413**  
**ADOPTION OF 29 CFR 1926.550-.556**

**29 CFR 1926.552**  
**Material Hoists, Personnel Hoists, and Elevators**

***29 CFR 1926.552(b)(8)***

Amended by **803 KAR 2:413 Section 1(2)** so that it reads:

All material hoists shall conform to the requirements of ANSI A10.5-1969, Safety Requirements for Material Hoists, with the exception that material hoists manufactured prior to January 1, 1970 may be used with a drum pitch diameter at least eighteen (18) times the normal rope diameter provided the hoisting wire rope is at least equal in flexibility to 6 x 37 classification wire rope.



**803 KAR 2:417  
STEEL ERECTION**

**29 CFR 1926.760  
Fall Protection**

**29 CFR 1926.760(a)(1)**

Amended by **803 KAR 2:417 Section 3(1)(b)** so that it reads:

(b) Each employee engaged in a steel erection activity who is on a walking/working surface with an unprotected side or edge ten (10) feet or more above a lower level shall be protected from fall hazards by guardrail systems, safety net systems, personal fall arrest systems, positioning device systems, or fall restraint systems.

**29 CFR 1926.760(a)(3)**

Amended by **803 KAR 2:417 Section 3(2)(b)** so that it reads:

Connectors and employees working in controlled decking zones shall be protected from fall hazards in accordance with subsections (5) and (6) of this section, respectively.

**29 CFR 1926.760(b)(1)**

Amended by **803 KAR 2:417 Section 3(3)(b)** so that it reads:

Each connector shall be protected in accordance with subsection (2) of this section from fall hazards of ten (10) feet or more above a lower level;

**29 CFR 1926.760(b)(3)**

Amended by **803 KAR 2:417 Section 3(4)(b)** so that it reads:

Each connector shall be provided with, wear, and utilize, at heights of ten (10) feet or greater above a lower level, a personal fall arrest system, positioning device system, or fall restraint system; or be provided with other means of protection from fall hazards in accordance with subsection (1) of this section.

**29 CFR 1926.760(c)**

Amended by **803 KAR 2:417 Section 3(5)(b)** so that it reads:

A controlled decking zone (CDZ) may be established in that area of the structure over six (6) feet and up to ten (10) feet above a lower level where metal decking is initially being installed and forms the leading edge of a work area. In each CDZ, the following shall apply:

**29 CFR 1926.760(c)(1)**

Amended by **803 KAR 2:417 Section 3(6)(b)** so that it reads:

Each employee working at the leading edge in a CDZ shall be protected from fall hazards of ten (10) feet or greater.

**803 KAR 2:420**  
**Blasting and Use of Explosives**

**29 CFR 1926.900**  
**General Provisions**

***29 CFR 1926.900(k)(3)(i)***

Amended by **803 KAR 2:420 Section 1(1)(a)** so that it reads:

The prominent display of adequate signs warning against the use of mobile radio transmitters, on all roads within 1,000 feet of blasting operations. Whenever adherence to this 1,000 foot distance would create an operational handicap, a competent person shall be consulted to evaluate the particular situation, and alternative provisions may be made which are adequately designed to prevent premature firing of electric blasting caps. The competent person may be a blaster certified by the Kentucky Department of Mines and Minerals with a working knowledge of mobile radio transmission and receiving hazards as related to use of electric blasting cap firing systems and designated by the employer. A description of any alternative shall be in writing describing the unusual conditions at the site and the alternative measure used. The description shall be maintained at the construction site during the duration of the work and shall be available for inspection by representatives of the Commissioner, Department of Workplace Standards.

***29 CFR 1926.900(k)(4)***

Amended by **803 KAR 2:420 Section 1(1)(b)** so that it reads:

Ensuring that mobile radio transmitters which are less than 100 feet away from electric blasting caps, in other than original containers, shall be deenergized, and have the radio transmission circuit or vehicle effectively locked against transmitter usage.

***29 CFR 1926.900(p)***

Amended by **803 KAR 2:420 Section 2(2)** so that it reads:

The use of black powder shall be prohibited except when a desired result cannot be obtained with another type of explosive, such as in quarrying certain types of dimension stone.

***29 CFR 1926.900(r)***

Amended by **803 KAR 2:420 Section 3(2)** so that it reads:

All electric blasts shall be fired with an electric blasting machine or properly designed electric power source, and in accordance with the provisions of subsection .906(a) and (r).

**29 CFR 1926.902**  
**Surface Transportation of Explosives**

**29 CFR 1926.902(d)**

Amended by **803 KAR 2:420 Section 4(2)** so that it reads:

Explosives or blasting agents shall be transported in separate vehicles unless the detonators are packaged in specified containers and transported all in compliance with DOT Regulation 49 CFR 177.835(g).

**29 CFR 1926.903**  
**Underground Transportation of Explosives**

**29 CFR 1926.903(o)**

Removed by **803 KAR 2:420 Section 5(2)**

**29 CFR 1926.905**  
**Loading of Explosives or Blasting Agents**

**29 CFR 1926.905(h)**

Amended by **803 KAR 2:420 Section 6(2)** so that it reads:

Machines and all tools not used for loading explosives into the boreholes shall be removed from the immediate location of holes before explosives are delivered. Equipment shall not be operated within fifty (50) feet of a loaded hole except that which is required when the containment of the blast is necessary to prevent flyrock. When equipment or machinery is used to place mats, overburden, or protective material on the shot area, a competent person (who may be a blaster certified by the Kentucky Department of Mines and Minerals) shall implement adequate precautions to protect the lead wires or initiating systems such as protecting the components from direct contact with materials which sever, damage, impact, or conduct stray currents to the explosives system. This would include preventing the dragging of blasting mats or running over the holes and systems with the equipment used.

**29 CFR 1926.905(i)**

Amended by **803 KAR 2:420 Section 6(4)** so that it reads:

No activity of any nature other than that which is required for loading holes with explosives and preparation required for initiating the blast and containment of flyrock from the blast shall be permitted in a blast area.

**29 CFR 1926.905(k)**

Amended by **803 KAR 2:420 Section 6(6)** so that it reads:

Holes shall be inspected prior to loading to determine depth and conditions. When necessary to drill a hole in proximity to a charged or misfired hole, the distance between these two holes must be greater than the depth being drilled and precautions taken to ensure the integrity of any adjacent-charged hole or misfired hole. This distance must be determined by a competent person (who may be a blaster certified by the Kentucky Department of Mines and Minerals) in order to insure that there is no danger of intersecting the charged or misfired hole.

**29 CFR 1926.905(n)**

Amended by **803 KAR 2:420 Section 6(8)** so that it reads:

In blasting, explosives in Fume Class I, as set forth by the Institute of the Makers of Explosives, shall be used; however, Fume Class I explosives are not required when adequate ventilation is provided and the workings are abandoned for a period of time sufficient to allow dissipation of all fumes.

**29 CFR 1926.906**  
**Initiation of Explosive Charges-Electric Blasting**

**29 CFR 1926.906(p)**

Amended by **803 KAR 2:420 Section 7(2)** so that it reads:

The blaster shall be in charge of the blasting machines, and no other person shall connect the leading wires to the machine except under the immediate physical and visual supervision of the blaster.

**29 CFR 1926.906(q)**

Amended by **803 KAR 2:420 Section 7(4)** so that it reads:

(q) Blasters, when testing circuits to charged holes, shall use only blasting galvanometers equipped with a silver chloride cell especially designed for this purpose or an instrument designed solely for use in blasting, which incorporate a current-limiting device into its circuitry. No instrument capable of producing over fifty (50) milliamps on direct short circuit shall be used.

**29 CFR 1926.906(s)**

Amended by **803 KAR 2:420 Section 7(6)** so that it reads:

Leading wires shall remain shorted and not be connected to the blasting machine or other source of current until the charge is to be fired.

**29 CFR 1926.907**  
**Use of Safety Fuse**

**29 CFR 1926.907(a)**

Amended by **803 KAR 2:420 Section 8(2)** so that it reads:

The use of a fuse that has been hammered or injured in any way shall be forbidden.

**803 KAR 2:421**  
**ADOPTION OF 29 CFR 1926.950-.960**

**29 CFR 1926.950**  
**Power Transmission and Distribution**  
**General Requirements**

***29 CFR 1926.950(c)(1)(i)***

Amended by **803 KAR 2:420 Section 1(1)** so that it reads:

The employee is insulated or guarded from the energized part. Insulating gloves, as well as insulating sleeves when necessary, rated for the voltage involved shall be considered insulation of the employee from the energized part, or .....

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## **SOURCES OF INFORMATION REGARDING OCCUPATIONAL SAFETY AND HEALTH IN KENTUCKY**

For information concerning the occupational safety and health standards, regulations interpretations, and actions of the Kentucky Occupational Safety and Health Standards Board, contact:

**Department of Workplace Standards  
OSH Regulations Development and Interpretation  
Frankfort, Kentucky 40601  
(502) 564-0978**

For information concerning occupational safety and health training, consultation, technical assistance, publications, and recordkeeping, contact:

**Division of Occupational Safety and Health Education and Training  
Frankfort, Kentucky 40601  
(502) 564-3536**

For information concerning occupational safety and health enforcement, contact:

**Division of Occupational Safety and Health Compliance  
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(502) 564-3535**



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